# DEPARTMENT OF DEFENSE AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 2014 AND THE FUTURE YEARS DEFENSE PROGRAM

**WEDNESDAY, MAY 8, 2013**

U.S. SENATE,
SUBCOMMITTEE ON AIRLAND,
COMMITTEE ON ARMED SERVICES,
*Washington, DC.*

## ARMY MODERNIZATION

The subcommittee met, pursuant to notice, at 9:32 a.m. in room SR–222, Russell Senate Office Building, Senator Joe Manchin III (chairman of the subcommittee) presiding.

Committee members present: Senators Manchin, Blumenthal, Donnelly, and Wicker.

Majority staff member present: William K. Sutey, professional staff member.

Minority staff member present: Ambrose R. Hock, professional staff member.

Staff assistant present: Daniel J. Harder.

Committee members' assistants present: Mara Boggs, assistant to Senator Manchin; Ethan Saxon, assistant to Senator Blumenthal; Marta McLellan Ross, assistant to Senator Donnelly; and Joseph Lai, assistant to Senator Wicker.

### OPENING STATEMENT OF SENATOR JOE MANCHIN III, CHAIRMAN

Senator MANCHIN. The subcommittee will come to order and we will get started. First of all, let me say to all of you, thank you. Thank you for being here and we appreciate it very much. So good morning and again thank you.

The Subcommittee on Airland meets today to receive testimony on Army modernization programs in review of the fiscal year 2014 budget request. I look forward to hearing from the Army today along with my friend and colleague Senator Wicker.

After a decade of war in Iraq and Afghanistan, I'm always inspired by the American soldier. Today's Army is seasoned by years of combat in the harshest conditions against a ruthless enemy. The soldiers of our Army have performed with remarkable professionalism, courage, and no small measure of sacrifice. This is true of the Army leaders, our soldiers, and their families as well. I ask all Army leaders here with us today, wherever, whenever you have

a chance, to please thank our soldiers and their families on our behalf, and our Nation is deeply grateful.

The subject of today's hearing, Army modernization, merits particular attention because of an exceptionally challenging fiscal environment and the many initiatives over the last few years to reorient and restructure the Army's acquisition policies and programs. No doubt the Army is wary of being reminded that its modernization efforts have not enjoyed a great deal of success over the past 15 years, as strategies, plans, and investment priorities appear to evolve with each change in Department leadership. Army modernization has had many names over the years, in the past 15 years, from "Digitization" to "Force 21" to "Army After Next" to "Interim Force" to "Objective Force" to "Future Combat Systems" to "Modularity and Capability Sets", to what is now known as a "Balanced Equipment Modernization Strategy", in which the Army will remain on track to equip a smaller force without sacrificing its decisive edge.

Yet, despite this turmoil and heartbreaking loss of time and money, the Army always finds a way to give our soldiers the equipment they need to get the job done. This doesn't mean we should not insist upon more stability and efficiency in Army modernization, but it's quite remarkable how American soldiers always accomplish the mission. This has been a hallmark of the American soldier in every one of our Nation's wars.

This year's hearing examines an Army modernization program complicated by the scope of strategic changes, the challenges of fiscal realities, and the natural uncertainty as our wars wind down and our national priorities shift. We look forward to our witnesses' testimony to address the underlying questions of how the fiscal year 2014 budget request, linked to likely changes to this year's appropriation and looking forward into the near future, keeps our Army the best in the world, ready today and tomorrow for whatever the Nation may ask it to do.

We look forward to this hearing, how Army requirements, acquisitions, and modernization strategies support the Army we have today and will have in 2017; how, given the uncertainty about the availability of resources and the necessary changes to the Army's size and structure, will the Army ensure that equipment readiness, reset, and modernization programs are appropriately prioritized, with tradeoff and risks managed, while at the same time stable, achievable, and affordable.

In this regard, the witnesses can paint a picture for this subcommittee of how the Budget Control Act, sequestration, continuing resolutions (CR), and a pending reprogramming request all figure into the dangers of an unstable, unachievable, and unaffordable modernization program. How will the Army identify and manage the inevitable and growing strategic risk to the Army's combat and tactical vehicle industrial base during times of declining budgets?

The Army's fiscal year 2014 modernization objective is to maintain the technological advantage no matter where our wars are fought. The base request, however, is $1.7 billion, almost 7 percent, less than last year's request. The Army is accepting measured risk to accommodate a tightening fiscal environment and manage pre-

carious readiness shortfalls begun and carried forward from last year.

These reductions for fiscal year 2014 are compounded by modernization reductions started last year and likely further reductions in a reprogramming request that we understand is currently under review by the Department of Defense (DOD). Clearly, the readiness of today's soldiers is Army leadership's most important duty. It is not a question of balance at the ground level. Units must be manned, trained, and equipped to support operations in Afghanistan and other unforeseen contingencies. The Nation plans for and resources the Army to be ready, and therefore it is a strategic imperative that it should always be so.

The Army is truly in transition during the period of declining funding, yet must continue to equip soldiers for what we ask them to do today. Frankly, the future, as is common in periods of declining resources, is less important. But this subcommittee's oversight responsibility is to ensure that the tradeoffs, although necessary, are reasonable, realistic, and manage risk in an appropriate manner relative to our defense strategy and the Army's needs.

We welcome the witnesses who join us here today. Lieutenant General William Phillips is the Army's principal officer responsible for research, development, and acquisition. As such, he has policy and program oversight of how the Army buys new and maintains current equipment. Lieutenant General James O. Barclay is the Army's principal officer responsible for matching available resources to meet the Army's requirements for mission success and to support soldiers by managing current force needs and future force capabilities. We want to thank you both for your many years of service to the Nation and the Army. General Barclay, we are particularly grateful that you could join us today and share your family's joy and pride in the safe return home of your son from his deployment to Afghanistan.

Now, my good friend Senator Roger Wicker will give his opening statement.

**STATEMENT OF SENATOR ROGER F. WICKER**

Senator WICKER. Thank you, Mr. Chairman, for a profoundly insightful and appropriate opening statement, and I join you in your sentiments.

I thank our witnesses, General Barclay and General Phillips. I appreciate your service and echo the appreciation that this subcommittee has for your sons, General Barclay, and for all the sons and daughters of Americans who've served with capability and bravery in our military service.

Mr. Chairman, today we are here to discuss Army modernization as part of the fiscal year 2014 budget. Our Army is battle-tested after a decade of sustained combat operations. America's soldiers demonstrate every day that they are the best led, best trained, and most professional land force in the world.

It's the responsibility of us in Congress and on this subcommittee to do what's necessary to enable the Army to maintain its hard-won combat superiority. Unfortunately, as the chairman mentioned, the budget request before us today falls short of that goal. The Army's base request for its modernization accounts is $1.7 bil-

lion below the Army's fiscal year 2013 request, 7 percent lower than last year.

The Army's fiscal year 2014 budget request cannot be reviewed without looking at the Army's cumulative budget situation. Prior to the passage of the CR in March, the Chief of Staff of the Army, General Odierno, informed the committee that the Army was facing a $17 to $18 billion deficit in its operation and maintenance (O&M) accounts for the current fiscal year. Even with the passage of the CR, Secretary McHugh and General Odierno testified before the Senate Armed Services Committee that the Army still faces a combined fiscal year 2013 shortfall of over $15 billion because of the combined effects of sequestration and the unexpectedly high overseas contingency operations (OCO) expenditures.

To address this critical O&M shortfall, the Army is being forced to raid accounts within its own budget. I'm deeply concerned that these cuts will fall on Army modernization accounts and have debilitating effects on the Army's future readiness.

The Army is facing significant challenges in its modernization accounts. I want to highlight three issues that are of concern to me. First, we must continue to support the Army's effort to network the soldier. This network is the centerpiece of the Army's equipment modernization program and the key enabler in its efforts to integrate Army operations with the joint force. By providing real-time networked information to decisionmakers and warfighters at all levels, the Army can become even more agile, adaptable, and capable than it already is. While the Army has made great progress in two of its major networking programs, namely the Warfighter Information Network Tactical and the Distributed Common Ground System, I still have concerns with the progress being made in the hand-held and vehicular radio programs.

Second, the Army faces the dual task of modernizing its rotorcraft fleet and sustaining America's rotorcraft industrial base amid financial constraints. This is very important. As I stated earlier, the President's request is $1.7 billion below the fiscal year 2013 request. It appears the Army's aviation, ammunition, and Ground Combat Vehicle (GCV) programs will bear the brunt of these cuts. Perhaps the witnesses can address these in their testimony.

The Army also had to make some difficult decisions regarding the Apache and it continues to struggle with the decision on how to proceed with the Armed Aerial Scout (AAS) program. I strongly believe the Army must make the maintenance of our fragile rotorcraft industrial base an integral part of its long-term modernization strategy. In March, the Army exercised admirable agility when it opted to keep existing production lines open by accepting delivery of select Apache helicopters to future contractor-funded retrofits. I applaud the Army's foresight for this decision. Likewise, the impact of the eventual decision to replace or upgrade the Kiowa Warrior platform will no doubt be felt for decades to come. As such, this decision must be carefully considered within the framework of the long-term viability of the rotorcraft industrial base.

Third, the Army's combat vehicle procurement program should be rooted in requirements and prioritized accordingly. The written testimony submitted by our witnesses indicates that the GCV, the Armored Multipurpose Vehicle, and the Joint Light Tactical Vehi-

cle (JLTV) are the Army's priority combat vehicle programs. At the same time, the Army is also addressing a longstanding capability gap with the Paladin Integrated Management Program, the self-propelled artillery, as well as tackling the challenge of resetting vehicles returning from Afghanistan.

I believe all members of the subcommittee will want to understand fully the witnesses' program prioritization, given our current fiscal environment.

So, Mr. Chairman, let me conclude by once again observing that you and I agree on many of the issues that we have both talked about. Let me observe that our Army continues to perform with remarkable courage, professionalism, and effectiveness despite incredibly hard circumstances. It's our responsibility to ensure that they have the resources to execute their mission in the defense of our Nation.

Thank you.

Senator MANCHIN. Thank you, Senator.

Let me say also to General Barclay that I know you have two sons that have served, and we mentioned your one son just returning. I want you to know this committee is still wishing a speedy recovery for your second son, who was severely injured in 2006. I hope he's doing well and I hope the family is doing well also, sir.

Senator Wicker, thank you, and I understand that you're going to have to join the Subcommittee on Seapower hearing already in progress. So we're going to break from protocol if you don't mind to quickly accommodate Senator Wicker. Senator Donnelly, if you have a scheduling conflict let me know.

Senator Wicker.

Senator WICKER. Thank you, Mr. Chairman.

Let the record reflect that the ranking member of the Subcommittee on Seapower, the distinguished senior Senator from Arizona, just came in, realized he was in the wrong room, and is scurrying over to the Subcommittee on Seapower hearing, which is obviously not already in progress, unless it's in progress without his presence.

I will soon try to join Senator McCain in that hearing.

Senator MANCHIN. He was wondering what we were doing sitting in the seats.

Senator WICKER. Right. It's terrible that we have so many things scheduled on top of each other. We're not going to be able to hear the distinguished president of South Korea when she addresses the joint meeting. But we're doing the best we can.

Let me say this, gentlemen. I want to start with the Light Utility Helicopter (LUH) and AAS, and say that I have concerns with the Army's delayed efforts to acquire the new scout helicopter and its impact on the industrial base. Have I emphasized that enough? After the Comanche and Armed Reconnaissance Helicopter program terminations, one would expect the Army to move forward quickly on a path that addresses the critical scout requirements identified by the Army.

Accordingly, I am distressed about the Army's decision to cut Lakota production early. This decision could shut down existing production lines when the Army has not made a final decision on

a replacement or modernization plan for its aging OH–58 Kiowa Warrior Armed Reconnaissance Helicopter fleet.

Last year, the Army conducted a Voluntary Flight Demonstration (VFD) for its proposed Kiowa Warrior replacement program, known as the AAS. This demonstration was supposed to help inform the decision on a solution to the Kiowa replacement. In March, Congress was briefed on the outcomes of the flight demonstration, which determined that more time would be needed before the Army can determine whether to replace or modernize the existing fleet.

As such, I question the Army's proposal to cut and eventually terminate procurement of the Lakota. I believe we have an obligation to maintain the vitality of our industrial base and to preserve industrial base competition until the Army determines a path forward on AAS.

So first to you, General Barclay, and then to General Phillips. My understanding is the Army could field a nondevelopmental aircraft for its reconnaissance helicopter, which means the helicopter can be produced in a short timeframe. Considering where the Army is with the decision to produce a new scout helicopter, wouldn't it be better, and wouldn't we be better served in terms of national security, keeping the Lakota production line warm until the Army is ready to field a new scout helicopter? General Barclay?

General BARCLAY. Thank you, Senator, for the question. First of all, if you look at the two different programs, one is the LUH program. The LUH program is a non-combat, off-the-shelf procurement that we used or procured to cover those shortfalls as we started moving our combat aircraft into theater. That was the reason that we purchased this. It can only operate in permissive environments. We only use it in the Homeland to cover those mission sets and we do not deploy that.

Our decision to reduce the number—we've actually completed all the buy except for 31 aircraft that we are not going to buy, and those 31 are only for the Active component. We will complete the buy for all of the Army National Guard (ARNG) and U.S. Army Reserve (USAR) for their requirements for the LUH.

You're linking that with the industrial base, with the manufacturer of that helicopter, which as I said is a commercial, not a combat aircraft. When we link that, they were one of the ones that came in on the VFD. We conducted that. I think we had five different ones that came in that we reviewed. What we have done now that we have gone back and briefed all of those industry partners in the rotary wing industry about how they fell out and what the results were based on their demonstration of the aircraft they brought to the table.

We have taken that information internally within the Army and we're laying that out against what the requirement for the future is, which is an AAS. As we look at that, we're basing that against what the uncertain times are with our fiscal constraints, where we can go in the future, and what we can afford to do.

So the Army is in the decision process now of making that decision, hopefully some time later this summer or early next fall, on whether we're going to procure or go for a procurement of an AAS, which will be a new developmental program, or whether we're

going to do a service life extension program on the current Kiowa Warrior fleet we have now.

Senator WICKER. You're going to give us a comprehensive briefing at a date certain, or can we expect that late summer, early fall?

General BARCLAY. That's the timeline we're on now. I think based on where the Chief and the Secretary are on that and us gathering the information, we're looking at a late summer to early fall decision from the Army leaders on the path ahead, on which path.

But regardless of whether we buy a new AAS or we do a service life extension on the current, we still have what's called the OH–58F Cockpit and Sensor Upgrade Program (CASUP) for the current fleet we have, and we have to continue that. That allows us to address safety and obsolescence issues with the current fleet we have, which will bridge us to either decision we make, to procure new or to Shelf-Life Extension Program the current fleet. We need to continue that program.

So it's really all linked together here as we move forward, Senator. I'll let General Phillips address the acquisition side.

General PHILLIPS. Senator, great question. Just a quick comment. The LUH at the end of the day has been a great aircraft for the Army, is still a great aircraft, and it met the mission requirements that General Barclay just described in the Active and the Reserve component. But that aircraft is really designed for a permissive environment only, so that's flying in continental U.S. operations essentially.

We are working with and have worked with EADS North America. We've met with the president of EADS just recently and continue to work with him on the production schedule. Last week they actually came forward and talked to us a little bit about foreign military sales (FMS) and the potential for continuing production using FMS and the facility in Mississippi.

At the same time, we have gone forward with the VFD, as General Barclay just described. The results of that essentially are this: we didn't find a single aircraft that was out there that can meet the Army's requirements. So if we were to go forward with an AAS, it would essentially be a development program, and that decision when it's made, probably mid-summer, sir, as we just described, we'll bring that decision forward to Congress and to you, sir.

Senator WICKER. You do concede that the mission of flying in a permissive environment has a vital national security function, do you not?

General BARCLAY. Yes, sir, it does. Again, as I've stated, on the LUH, we have bought all those requirements less 31 for the Active component. The Active component had a very small number of the total aircraft LUH that were bought. That was basically to cover the gaps we had because of the Blackhawks that we had to take out of the homeland and move forward into the fight.

Now as we're drawing down—with Iraq we're out—we're drawing down in Afghanistan, we now have those aircraft back. So based on the fiscal uncertainty and where we were with the budget and stuff, it was prudent to make the decision to not purchase the last 31 aircraft for the Active component. The rest, as I say, the rest of those aircraft for the ARNG and USAR, which perform those

missions—some of them are down performing the mission on the southwest border. They perform all those types of missions here that respond to the States and the Governors and the like.

Senator WICKER. Thank you.

Mr. Chairman, you've been very accommodating. I have a question for the record about the Apache helicopter supply chain problems and I will submit that to the record, and ask your leave so that I can go to the other subcommittee, with my deepest appreciation.

Senator MANCHIN. Absolutely, Senator Wicker.

Also, my dear friend Senator Donnelly has to do the same. If he may ask his questions now and, sir, I will stay here and we'll conduct the meeting as intended. But thank you for your indulgence.

Senator Donnelly.

Senator DONNELLY. Mr. Chairman, thank you.

Generals, thank you so very much. I just recently got back Saturday night from Afghanistan. The pride you can take in all of our servicemembers is breathtaking, the job they are doing.

I wanted to ask about the next generation of warfighting vehicles, the JLTV. It is very critical in my mind that we continue forward with this program, and I just wanted to get an update on the JLTV as to where we are now and what effect sequestration will have on it.

General PHILLIPS. Sir, great question. As was mentioned earlier, JLTV is one of the top modernization programs for the Army. We have to have that vehicle. We intend to buy about 49,000. The Marines are teamed with us. The first vehicles that will come off the production line when we make that production contract will essentially go to the Marines because of their need. It's critical for both of us and it is a joint program. We have issued a contract for engineering, manufacturing, development. There are three strong industry partners.

Senator DONNELLY. One of them happens to be from my hometown.

General PHILLIPS. Yes, sir, and I'm very familiar with AM General and the great work that they've done for the Army for many years.

We're high on getting that program through the development process and into production, when we can achieve Milestone C, get through all the testing, and then issue that production contract.

I want to emphasize this, though. Sequestration has an impact on every modernization program that we have this year, and in fiscal year 2014 it may have an even greater effect. What it has done to the JLTV program, and we're trying to mitigate this to the best we can, is potentially move back some of the testing by about 3 months, maybe up to 4 months. So sir, for JLTV today the impact of fiscal year 2013 is about a 3-month slip at most, we think. We'll do our best to try to mitigate that and bring it in.

Senator DONNELLY. Obviously my primary concern is protecting our warfighters.

General PHILLIPS. Yes, sir.

Senator DONNELLY. I also wanted to ask you about what the Army's intent is in regards to modernizing tactical radios to improve communications on the battlefield?

General PHILLIPS. Sir, the Joint Tactical Radio System (JTRS) program—just a slight bit of history. The Army took this program on about 4 years ago from the Office of the Secretary of Defense (OSD); it was a joint program managed by them. We put a general officer in charge of JTRS, the first time a general has really managed the program from the very beginning. We have realigned every family of radios within the JTRS program.

What we found as we looked with industry partners, those that were a part of the program of record and those that were not, is in many cases the industry partners that were not a part of the program of record had actually done better in developing better radios, that were cheaper, better capability, and met almost all of our requirements in most cases.

So we're going forward with a full and open competitive strategy for three of the key radios of that entire family, and we think we have the right strategy going forward, sir.

Senator DONNELLY. This next question, I know this is something our chairman is very interested in as well, I would just like to know, in regards to sequestration, if you had flexibility would that be helpful to you?

General BARCLAY. Yes, sir, it would. Again, the challenges we're facing this year with reprogramming and how we're looking at that and the limits. Again, we were given some flexibility, more so than we have had in previous years. But we think as we move into the future, it still being very uncertain and unknown about what those amounts are going to be, we would like to have that flexibility where we could then move—because to us the challenge is the short-term decisions we're making will have long-term impacts. If we can have at least some type of ability to project out and know that we have the ability or flexibility to make and move and change, then that allows us to take care of some of these programs, because right now we're just reacting and having to try to sustain as much as we can, without having a clear picture of the future. So yes, sir, flexibility would be a tremendous help, sir.

Senator DONNELLY. Thank you very much. General Barclay, thank you for your family's service and, General Phillips, for your service and your family's service as well.

Thank you, Mr. Chairman.

Senator MANCHIN. Thank you, Senator Donnelly.

For the record, Senator Donnelly's statements and questions and also Senator Wicker's will be entered into the record.

With that, we're going to go ahead and get started with our opening comments from today's witnesses. So we'll start with General Barclay, if you would.

**STATEMENT OF LTG JAMES O. BARCLAY III, USA, DEPUTY CHIEF OF STAFF OF THE ARMY (G–8)**

General BARCLAY. Chairman Manchin and the rest of the members of the committee here and distinguished members of the committee: Thank you for this opportunity to discuss the Army's fiscal year 2014 President's budget and as it relates to our modernization plan. On behalf of Secretary McHugh and General Odierno, I'd like to take this opportunity to thank you for your steadfast support and commitment to our Army and our soldiers.

In your letter of invitation to come over and testify, you asked that we address modernization and its relationship to planned end strength and force structure changes. I want to assure you that, although we're entering an incredibly turbulent time for equipping our units, our number one priority remains supporting our warfighters in Afghanistan. We owe these brave soldiers nothing less.

Over the next 3 years, we not only have to deploy and redeploy units still in combat or coming home from combat, we also have to retrograde theater equipment that is there and get it home in order to sustain our equipment on hand (EOH) statuses. We're also reorganizing our brigade combat teams. We have to keep Korea Force ready to fight and reestablish our global and regional response force.

To do all this, we have to do it with substantially less money than we had planned, due to sequestration. Failure to get this right will impact the equipment modernization and readiness of our units for years to come.

Throughout our history, we have drawn down our Army after every war. What is different this time is that we are drawing down our Army before the war is over. The previous drawdowns have resulted in a less-than-ready and hollow force. The effects on our equipment modernization will be dramatic because in the near term we cannot reduce force structure in a rapid manner, nor can we reduce the cost of the war quickly enough to pay the Army's share of the sequestration bill. Therefore, modernization is going to be taxed twice, once for its proportional share and then again to pay for those war costs and to meet the upcoming costs in the future.

Sequestration will result in delays or changes to every one of our modernization programs, to include the GCV, the network, our aviation systems, the JLTV, and in most cases increasing their costs. It will also create an inability to reset our equipment employed in the past 12 years of war, resulting in significant delay in equipment readiness for six divisions.

All of these effects are in addition to the changes that we made in the 2014 President's budget request that we're here to discuss.

You also asked that we review the 2014 OCO request which the administration will present to Congress in the next few months. Since this request is not yet final, it's hard to provide the specifics on it as we are still working the details to try to meet those goals of what those costs are. But I would like to point out that the costs of the war do not go down immediately as our soldiers return. We've proven in Iraq that as we're retrograding the costs go up as you're closing down combat outposts and forward outposts, that those costs rise, and you're also retrograding equipment, and also the reset aspect of this.

In fact, we're going to need your support for funding for the reset and replacement of our equipment for 3 years beyond the return of our forces from Afghanistan. Failure to do this would have a catastrophic effect to unit readiness.

We're all aware of the strains on the Federal treasury and the desire to reduce war funds as soon as our soldiers return home. I

would ask that you support future requests for the critical reset of our equipment.

In March of this year, Secretary McHugh and General Odierno published their Army equipment modernization strategy. This strategy focuses on our efforts to support our soldiers and small unit formations while maintaining our advantage to be able to deter and defeat potential adversaries. We'll do this by identifying achievable requirements, applying best practices in acquisition and sustainment, and seeking incremental improvements, while harnessing network-enabled capabilities to solve our near-term needs, all the while investing in military-unique revolutionary and evolutionary technologies to solve future needs.

The key to this strategy is procuring equipment that is versatile and tailorable, yet cost-effective and affordable. The centerpiece of our equipment modernization program is the soldier and the squad. Our investment plan provides our small units with a range of equipment, including individual and crew-served weapons, next-generation optics and night vision devices, and body armor and advanced individual protection equipment, that provide lethality and force protection to the soldier on the ground.

In order to provide our soldiers with an unparalleled advantage, we intend to enhance our equipment with incremental improvement by integrating technologies and applications that empower, protect, and unburden soldiers and the formations by improving our network in order to enable decisionmaking across the joint force, while improving our vehicle fleet capabilities by increasing the lethality and mobility, all the while optimizing survivability and sustainability, and also improving our aviation platforms.

Even without the effects of sequestration, the shift in the defense strategies and the previous reductions in the defense budget have caused the Army to make tough choices, resulting in significant changes to almost 100 of our acquisition programs. We have restructured almost 40 programs. We've slowed deliveries in about 50 programs and made the decision to accelerate very few.

As we determine the effects of sequestration in 2013 and beyond, I am certain other programs will have to be adjusted as well. I'd like to emphasize once again to the committee that the effects of sequestration on our modernization account will be felt. Within the Army, in addition to the approximately 10 percent across the board reductions, we will have to reprogram modernization dollars to pay for operations in Afghanistan. Equipment that we thought we were going to have and that our plans were based upon will not be procured or reset.

In conclusion, sir, I've been the Army G–8 for 10 months, and it is an honor for me to be here before you today representing the great men and women of our Army. Every day in peace and war, our soldiers, along with our airmen, sailors, marines, and coast guard personnel, defend our Nation and all that is asked of them. The state of our Nation's finances as well as the financial struggles of our citizens are also on our minds. We know that they are struggling financially, yet they steadfastly provide our soldiers with the resources they need, and we are grateful.

Our commitment to you is that we spend each and every dollar wisely and only ask for that which we truly need. The Secretary

and the Chief have made this perfectly clear in their equipment modernization strategy, as they have challenged us to be both cost-effective and affordable.

I look forward to answering your questions today and working with you in the future.

Senator MANCHIN. Thank you, General Barclay.

[The prepared statement of General Barclay follows:]

PREPARED STATEMENT BY LTG JAMES O. BARCLAY III, USA

INTRODUCTION

Chairman Manchin, Ranking Member Wicker, distinguished members of the Subcommittee on Airland, thank you for this opportunity to discuss the Army's fiscal year 2014 President's budget as it pertains to Army modernization. On behalf of our Secretary, the Honorable John McHugh, and our Chief of Staff, General Ray Odierno, I would like to take this opportunity to thank you for your steadfast support and commitment to your Army and our soldiers.

The generous support of the American people and Congress over the past 11-plus years of conflict has provided us the resources necessary to defeat our Nation's enemies, while protecting our soldiers and sustaining the force. It has also allowed us to modernize the Army, while reducing pre-2001 equipment shortages. We have significantly increased modernization levels over the past 11 years in all of our Army components.

Equipment shortages have been reduced significantly, particularly in the Army National Guard (ARNG) and U.S. Army Reserve (USAR). In 2001, the Active component (AC) had 85 percent of its equipment on hand, the ARNG had 81 percent on hand, and the USAR had 75 percent on hand. As of 2012, AC equipment on hand stood at 91 percent, ARNG at 89 percent, and USAR at 86 percent. The Army today is better modernized and equipped than at any time in recent memory.

Yet today's fiscal realities endanger the progress we have made in equipping. If the reductions in discretionary caps from fiscal year 2014 to fiscal year 2021 as outlined in current law—known as sequestration—take effect, the Army may lose balance between end strength, readiness, and modernization resulting in a hollow force.

To provide a guide for equipping our Army during these uncertain fiscal times, we have developed a flexible Army Equipment Modernization Strategy (AEMS). The AEMS is designed to account for normal cyclical downturns in defense spending that occur after every war. The reductions caused by sequestration, however, are occurring much sooner and at a much steeper rate than anticipated. As a result, all acquisition priorities and many equipment modernization programs may face unanticipated schedule or cost impacts in the out years.

EQUIPMENT MODERNIZATION

The AEMS focuses our efforts on supporting our soldiers and small unit formations with the network, vehicles, and other enablers, while maintaining our advantages to deter and defeat potential adversaries by: (1) identifying achievable requirements; applying best practices in acquisition and sustainment; seeking incremental improvements; and harnessing network enabled capabilities to solve near-term needs, while (2) investing in military-unique revolutionary and evolutionary technologies to solve future needs. The key to this strategy is procuring equipment that is "versatile and tailorable" yet cost-effective and affordable.

As a part of this strategy, the Army provides a wide range of capabilities as an indispensable member of the Joint Force. Every day, the Army maintains deployable contingency forces, employs forward-based capabilities, and conducts multilateral exercises with partners and allies. The Army also provides humanitarian assistance when necessary. Army forces set theaters for the combatant commanders, constantly maintaining the critical logistical, communications, intelligence, medical, and inland ground transportation infrastructure to support all U.S. Armed Forces plans and contingencies. Army units provide space, air, and missile defense capabilities for the Joint Force. We build and operate communication networks that connect our own units, the joint community, and interagency and multinational partners. Soldiers provide essential logistics infrastructure, delivering food, fuel, ammunition, materiel and medical support that sustain joint operations ranging from combat to humanitarian assistance. In addition, the Army collects and analyzes the intelligence that

informs our actions and measures our progress, and provides the majority of the forces in U.S. Special Operations Command.

We will take advantage of government and commercial technologies to buy and integrate mature incremental improvements in the near-term, while investing in revolutionary and evolutionary technologies for the future. Through this approach, we will become more efficient, pursuing smaller procurement objectives, leveraging the results of experiments and demonstrations.

For example, the Network Integration Evaluation (NIE) provides the Army with valuable soldier-driven evaluations and assessments of network technologies, while also aiding in the development of tactics, techniques, and procedures for network capability. NIE also informs the Army's capability requirements, and better informs industry on how to refine and mature new and existing capabilities. Several industry systems that participated in prior NIEs incorporated soldier feedback into updated versions featuring both software and hardware enhancements. NIE provides insights from multiple organizations and stakeholders simultaneously, yielding better information to decisionmakers faster. Unfortunately under sequestration, the Army may be forced to reduce the scope of NIE, resulting in fewer systems, vehicles, and industry participation, which will in turn result in fewer operational test scenarios and less data collected. This will ultimately delay the production and fielding of some acquisition programs.

### CAPABILITY-BASED PORTFOLIOS

The Army manages equipment modernization through capability-based portfolios. The strategy for each portfolio is different and is dependent on many factors to include the modernization level within the portfolio, the threat gaps across the portfolio, and the status of the industrial base. Each portfolio will look out over the near, mid, and far term to determine investments and divestments across the Army.

In order to provide our soldiers with unparalleled advantage, our equipment portfolios will incorporate incremental improvements by integrating technologies and applications that empower, protect, and unburden soldiers and formations by improving our network in order to enable decisionmaking across the Joint Force; improving our vehicle fleet capabilities by increasing lethality and mobility while optimizing protection and sustainability; and improving our aviation platforms with digitization and additional procurement of unmanned aviation systems.

### THE SOLDIER AND THE SQUAD

The centerpiece of our equipment modernization program is the soldier and the squad. Our investment plan provides our small units with a range of equipment including individual and crew-served weapons, next generation optics and night vision devices, and body armor and advanced individual protection equipment, providing lethality and force protection to the soldier on the ground. Tactical overmatch will be created by a suite of small-unit systems including unmanned aircraft systems, ground-based robots, counter-improvised explosive devices, and the latest surveillance systems. The Army equipment modernization goal is to build outwards from the soldier and squad and to sustain our advantages in mobility; logistics; and command, control, communications, computers, and intelligence at the tactical, operational, and strategic levels.

Planned improvements for dismounted soldiers include a mission command system that allows soldiers to see each other's positions, collaboratively mark hazards, and provides on-the-move broadband voice, data and video. This unprecedented situational awareness, coupled with advanced sensors and lightweight small arms systems, will ensure that our soldiers are unmatched on the battlefield.

One of our highest priorities is to off-load weight and complexity from the soldier, easing physical, training, and maintenance burdens, standardizing mechanical and software interfaces and developing consistent cognitive and physical ergonomics that maximize safety and resilience. In the near term, the soldier and squad portfolio will prioritize the modernization of existing weapons, leveraging "off the shelf" technologies, and invest in the development of new weapons. In the area of protection and mobility, the Army will incrementally improve ballistic protection against existing enemy weapons while lightening the soldier's load. For example, the female size Generation III Improved Outer Tactical Vest continues to provide the same unsurpassed ballistic protection of existing Army body armor, while providing eight additional sizes in conjunction with other modifications designed to provide a better fit.

### MISSION COMMAND

Our Mission Command portfolio is an integrated and interoperable network that connects all echelons from the soldier to the Joint Task Force. It is designed to pro-

vide the right information from a myriad of sensors and data sources, in time to enable soldiers to make sound tactical decisions. The network also provides the squad connectivity to other Army and Joint assets, allowing access to multiple firepower, intelligence, and combat support systems even in the most demanding physical terrain and complex human environments. The result is our smaller forces are empowered with network-enabled capabilities. Our fiscal year 2014 budget request will provide four Brigade Combat Team sets of Warfighter Information Network-Tactical (WIN–T) Increment II, Joint Battle Command-Platform, Nett Warrior, Rifleman Radio, Mounted and Dismounted tactical networking radios, and the Maneuver Network Vehicular Radio for Capability Set fiscal year 2015, while continuing to develop WIN–T Increment 3, which includes an aerial layer and increased bandwidth. WIN–T funding was increased in the President's budget request for fiscal year 2014 to acquire additional quantities needed to support testing and networking on-the-move capability. The WIN–T Increment 2 networking on-the-move capability was recently validated by 3rd Brigade, 10th Mountain Division in a Mission Rehearsal Exercise.

GROUND MOVEMENT AND MANEUVER

The Ground Movement and Maneuver portfolio provides soldiers the protected mobility required to deliver them safely to, on, and from the battlefield. The Army's priority combat and tactical vehicle programs are the Ground Combat Vehicle (GCV) and the Armored Multipurpose Purpose Vehicle (AMPV). We will continue to make the necessary adjustments in the GCV program—particularly as budget uncertainty continues—to ensure that we deliver an effective and affordable replacement for the aging Infantry Fighting Vehicle variant of the Bradley. We will select one contractor in the Engineering and Manufacturing Design phase of the GCV program, saving significant Army Research, Development, Test, and Evaluation (RDT&E) resources that we will reinvest in other modernization programs.

In the case of AMPV, it is a model program for cost constraints—utilizing mature technologies, strict cost limits, and rigorous analysis of requirements. Replacing our Vietnam-era M113 Personnel Carrier is crucial to our Armored Brigade Combat Teams by providing survivable, network enabled combat support vehicles with the necessary protection and mobility.

Abrams funding in fiscal year 2014 provides continued RDT&E funding for Abrams Engineering Change Proposal (ECP) development, which will buy back power deficiencies, improve protection, and provide the ability to accept future network and protection upgrades. Abrams procurement funding supports continued armor production, safety modifications, and operational field modifications.

Fiscal year 2014 funding for the Bradley Family of Vehicles program includes procurement of ECP 1 for track and suspension upgrades, transmission upgrades to ensure the vehicle can be safely operated at full combat weight and completing fielding of Operation Desert Storm-Situational Awareness variants to the Army National Guard.

In regard to Stryker, the Army has validated the enduring requirement for the Double V-Hull (DVH) Stryker configuration and an analysis is being conducted to determine distribution of the current DVH vehicles within the nine Stryker Brigade Combat Teams.

TACTICAL WHEELED VEHICLE STRATEGY

Our objectives are to progressively modernize the Tactical Wheeled Vehicle fleet to improve performance, payload, and protection, and integrate the Mine Resistant Ambush Protected Family of Vehicles into our force structure. Currently, the Army is moving forward with developing the Joint Light Tactical Vehicle (JLTV) with the Marine Corps to fill capability gaps in the light vehicle fleet by carefully balancing performance, payload, and protection. All JLTV are produced armor-capable, and when armored can provide the same level of protection as the Mine Resistant Ambush Protected All Terrain Vehicle (M–ATV), better network integration than the High Mobility Multipurpose Wheeled Vehicle (HMMWV) and better mobility and transportability than the M–ATV.

Affordability is at the forefront of all decisions in this portfolio. Solutions must carefully balance protection against cost and mobility. Additionally, our strategy will take advantage of the young fleet age and divest tens of thousands of wheeled vehicles to reduce sustainment costs.

AVIATION

The Army has a continuing requirement for a light, armed helicopter for manned, armed aerial reconnaissance, surveillance, and light attack missions. Currently this

role is filled by the OH–58 Kiowa Warrior. The Army is currently considering whether to compete a new start Armed Aerial Scout program or to recapitalize the OH–58.

To address obsolescence and safety concerns until a viable replacement is procured, the Army is investing in the Cockpit and Sensor Upgrade Program for the Kiowa Warrior. It is a priority Army aviation program due to the persistent high operational demand for this capability and the need to modernize 1970s platforms.

The Army will procure remanufactured AH–64Es and will defer the procurement of new build AH–64Es beyond fiscal year 2019, pending a review of attack helicopter force structure. Both the Kiowa Warrior and the Apache AH–64E platforms have been instrumental in both theaters, and modernizing and remanufacturing them enhances our battlefield capabilities while also reducing overall costs to the taxpayer. Finally, the CH–47F multi-year procurement contract II, will fill all Army, Army National Guard and Army Reserve Chinook requirements.

FISCAL REALITIES AND MODERNIZATION

Fiscal realities have caused the Army to make tough choices by delaying, restructuring, and terminating programs in fiscal year 2014. We will continue to revalidate modernization requirements, reexamine programs' affordability and cost effectiveness, and determine if there are alternatives that can satisfactorily meet the need at less cost.

In addition, the Army is continuously assessing its requirements and resourcing processes. We have instituted processes in several large programs, which involve the acquisition and requirements communities working in close collaboration to screen requirements, and identify areas where risk can be mitigated by adjusting requirements to avert unnecessary cost or schedule impacts. The focus is on discerning the true "must-have" capabilities in pursuit of affordable and achievable programs. The GCV and the JLTV are two recent examples. In the case of the GCV, high risk requirements were eliminated, and in the case of the JLTV, requirements were prioritized to give industry the needed flexibility to perform on budget.

CLOSING COMMENTS

The goal of our Equipping Modernization Strategy is to ensure soldiers are equipped for the current fight as well as future contingencies. Although we are a force in transition during a period of declining resources, we must continue to provide the Army with the best equipped, most modernized, and most capable force that will prevail on any battlefield against any enemy. In some cases this requires the procurement of newly designed combat vehicles that incorporate the lessons learned from more than 11 years of conflict, and the ability to incorporate new networked technologies. In other cases it requires modernizing equipment to account for new power, weight, or obsolescence, and in some cases it only requires resetting existing equipment to roll back years of excessive wear and tear as it returns from Operation Enduring Freedom.

These continue to be challenging times for our Nation and for our Army, and I assure you, the members of this subcommittee, that the Army's senior leaders are working hard to address these challenges and to meet the needs of the Nation now and in the future.

Mr. Chairman, members of the subcommittee, I thank you again for your steadfast and generous support of the outstanding men and women of the U.S. Army, Army civilians, and their families. I look forward to your questions.

Senator MANCHIN. General Phillips.

## STATEMENT OF LTG WILLIAM N. PHILLIPS, USA, PRINCIPAL MILITARY DEPUTY TO THE ASSISTANT SECRETARY OF THE ARMY FOR ACQUISITION, LOGISTICS, AND TECHNOLOGY, AND DIRECTOR, ACQUISITION CAREER MANAGEMENT, AND CHIEF INTEGRATION OFFICER

General PHILLIPS. Good morning. Chairman Manchin, Ranking Member Wicker, and distinguished members of the subcommittee, thank you for the opportunity to testify on the Army's modernization and acquisition program for fiscal year 2014. On behalf of our Army, I thank you for your steadfast support to provide our courageous men and women in uniform with world-class weapons, sys-

tems, and equipment. Sir, at the end of the day our Army is the most equipped in the world, and that doesn't happen by chance. It happens because of a lot of hard work and dedication from many, to include the members of this committee. So, sir, we thank you.

Upfront, I would also like to extend my sincere appreciation for your support for a number of critical acquisition programs, to include the award of multi-year contracts. This action alone will save taxpayers over $2 billion on the Chinook and Blackhawk programs alone.

Our Army and our Army acquisition face unprecedented fiscal and budget challenges. Sequestration is having a devastating effect on Army modernization. To best meet the physical challenges we face, the Army has focused on driving affordability and cost-effectiveness in every decision we make and on every program. We remain committed to our modernization strategy, which begins with the soldier, the most effective weapon in the battlefield. The soldier and squad are the foundation of our Army and the centerpiece of our modernization programs. We will equip our squads for tactical overmatch in all situations. We will connect soldiers to the network and we will provide vehicles that improve mobility, lethality, and survivability. We will provide the soldier and the squad with a range of equipment, including individual and crew-served weapons, next-generation optics, night vision devices, and the world's best body armor. Our squad formation's tactical superiority will be enabled by a suite of small unit systems including unmanned aerial systems, ground-based robots, counter-improvised explosive devices (IED), and the latest surveillance systems.

We will connect the soldier to the Army's network to create greater situational awareness and overwhelming superiority. It provides the squad connectivity with the joint assets as well.

Our combat and tactical wheeled vehicle fleets are being developed to connect this more capable squad with the network. Our future vehicle fleets will also provide increased lethality and mobility to squads while optimizing survivability through the use of armor packages that can be scaled to meet mission requirements.

Our modernization efforts are designed to prepare the entire force for a complex and uncertain battlefield by putting a squad with precise information and overmatch capability in the right place at the right time to accomplish their mission.

For Army aviation, we will continue to successfully modify, upgrade, and remanufacture existing platforms to extend the life of our aircraft and keep our air crews safe. We will continue to invest in science and technology for the future fleet of aviation as well.

Mr. Chairman, I would like to briefly address the defense industrial base. The upcoming end of combat operations and the changing fiscal environment are prompting the Army's commercial and organic industrial base to adjust to a new reality of reduced requirements and constrained resources. Of great concern to the Army are the likely long-term effects, to include the loss of critical skills, the loss of suppliers at all tiers, and an increase in the number of single-point failures in the supply chain affecting Army logistics and industrial base operations. The Army is aggressively evaluating how best to identify and preserve critical industrial base capabilities.

Mr. Chairman, the Army continues to prioritize sound program management, acquisition that drives affordability, executable requirements, and achievable acquisition strategies. We have taken specific steps to avert the leading causes of the past program cancellations. In addition, the Army has fully embraced the DOD Better Buying Power initiatives to address cost and schedule and schedule risk in programs and achieve better value for taxpayers. In 2012 alone, we achieved $370 million in should-cost initiatives that went across over 300 programs. During my 3 years in this position, we have made significant improvements in the Army acquisition process.

In closing, Mr. Chairman and distinguished members of the subcommittee, these are difficult and challenging times. I thank you again for your steadfast and strong support of our courageous men and women in uniform. Sir, I look forward to your questions.

[The prepared statement of General Phillips follows:]

PREPARED STATEMENT BY LTG WILLIAM N. PHILLIPS, USA

INTRODUCTION

Chairman Manchin, Senator Wicker, and distinguished members of the Subcommittee on Airland, we thank you for this opportunity to discuss the fiscal year 2014 budget and overseas contingency operations requests as they pertain to Army Modernization as well as your steadfast support and shared commitment in this endeavor on behalf of the Secretary of the Army, the Honorable John McHugh and the Army Chief of Staff, General Ray Odierno. I would also like to thank you for help in providing the Army the means to award multi-year contracts through the passage of the Appropriations Bill which funds the Department of Defense through the rest of the fiscal year. This alone will save the taxpayer over $2 billion in cost avoidance. We are pleased to represent U.S. Army leadership, members of the Army Acquisition workforce, and the more than 1 million courageous men and women in uniform who have deployed to combat over nearly 12 years, who have relied on us to provide them with world-class weapon systems and equipment to ensure mission success.

ARMY EQUIPMENT MODERNIZATION STRATEGY

As we look to the future, our priority is to maintain the best equipped Army in the world and to ensure we are postured to fight and win the next conflict. We recognize the need to shape the Army with an understanding of both our national security obligations, the strategic rebalancing to the Asia-Pacific region, and current fiscal constraints. The theme of our Equipment Modernization Strategy is "versatile and tailorable, yet affordable and cost-effective."

The centerpiece of this strategy is the soldier and squad, ensuring that we continue to maintain advantages in mobility, logistics, command and control, and intelligence. The soldier and squad must be enabled through the network, facilitating decisionmaking across the Joint Force, and delivering this capability with focused investments in key enabling technologies. The Soldier and Squad Investment Plan provides our small units with a range of equipment including individual and crew-served weapons, next generation optics and night vision devices, and body armor and advanced individual protection equipment, providing lethality and force protection to the soldier on the ground. Our combat and tactical vehicle fleets are also being developed to network this more capable squad, provide increased lethality and mobility, while optimizing survivability through the use of armor packages that can be scaled to meet mission requirements. In the same manner, aviation improvements will provide our forces with greater mobility and responsiveness. Currently the Army is conducting a comprehensive study of the tactical wheeled vehicle fleet. At the completion of this study and pending force structure decisions, the Army will update its Tactical Wheeled Vehicle Strategy.

This approach helps achieve the optimal balance between obsolescence of existing capabilities, innovation, and overmatch capabilities through new technologies and weapon systems. As a result, our approach must be agile and strategic moving forward, reflecting the need to modernize equipment in key portfolios, leveraging mature capabilities where appropriate, and addressing the needs of the Industrial

Base. Maintaining technological advantage over our adversaries will be paramount, so our strategy must include a balanced investment between mature technologies for system upgrades, and research investments between evolutionary and disruptive technologies.

To achieve this strategy within our fiscal constraints, we must make focused investments in capability. As such, we are engaged in a detailed assessment of our various equipment portfolios to determine our future investment, sustainment, and divestiture posture. This will be the first time we have projected out 30 years, ensuring that we understand the threat and associated capability gaps, and from that developing our investment strategy across Science and Technology and Acquisition Programs of Record. Alignment across this process, as well as affordability, will be key. Maintaining critical Industrial Base sectors and preserving the capacity to surge when the need arises will also be a priority.

Our approach must consider rapid changes in technology, and where our traditional process does not suffice, we must institutionalize new processes for rapid acquisition that allow us to be responsive to the threat and agile in delivering new capability. We will leverage the government, academic, and commercial sectors to deliver this capability, and will continue to execute efforts like the Network Integration Evaluations (NIE). These evaluations ensure a holistic approach to integration that assesses the latest, innovative technologies while creating efficiencies across our test programs.

Key principles within our Equipment Modernization Strategy include:

- Fostering competition to reduce cost and improve quality
- Reducing complexity to the soldier to use and maintain equipment, thus reducing our training requirement
- Emphasizing interfaces and interoperable standards with our joint and coalition partners
- Divesting equipment as a means to modernize with limited resources
- Balancing modernization with changing threats, missions, and technologies, as we manage impacts on training and sustainment

ARMY NETWORK AND GROUND SYSTEMS MODERNIZATION PROGRAMS

The President's budget for fiscal year 2014 supports the 2013 Army Equipment Modernization Plan, which identifies the Army's highest modernization priorities. Nearly half of them are associated with the network, which the Army is committed to developing and fielding as a single entity. Network modernization seeks to provide the same basic capabilities from home station to the lone dismounted soldier in theater. The Army is also striving to become hardware agnostic by focusing on software applications that meet our unique needs. These applications must be able to operate on existing hardware, and meet requirements for interoperability with other applications.

A major contributor to the successful development of new network capabilities is the NIE, conducted on a semi-annual basis at Fort Bliss, TX. Our latest NIE just began on May 4 and is scheduled to conclude on May 27, 2013. The NIE provides an operational venue to evaluate and integrate new commercial technologies and network capabilities for possible inclusion into the network before it is fielded to operational units, thereby relieving those units of the integration burden. Resources have been added to the fiscal year 2014 budget request to allow procurement of commercial products evaluated and recommended for fielding based on NIE results.

*Warfighter Information Network-Tactical*

Warfighter Information Network-Tactical (WIN–T) provides a secure and reliable broadband network that supports tactical communications (voice, data, and video), enabling mission command while on-the-move. It features the latest technology to plan, manage, fight, and defend the network. This capability will be delivered in incremental stages. WIN–T Increment 1 fielding was completed in fiscal year 2012 and the budget request supports planned technology upgrades to enhance interoperability with subsequent increments. WIN–T Increment 2, which delivers a mobile network capability from company level to theater, is currently being fielded to deploying units. The budget will procure WIN–T Increment 2 equipment for four Brigade Combat Teams and two Division Headquarters. The budget request supports WIN–T Increment 3 continued development of the full networking capability, including additional connectivity via employment of an airborne tier.

*Family of Network Tactical Radios*

The Family of Network Tactical Radios, to include the former Joint Tactical Radio System and the Mid-Tier Networked Vehicular Radio programs, is the future deployable mobile communications family of tactical radios, providing advanced joint

tactical end-to-end networking data and voice communications to dismounted troops, aircraft, and watercraft platforms. The fiscal year 2014 budget request provides an interoperable family of advanced single and dual-channel radios providing soldiers, sensors, and platforms with tactical, lower tier networking communications capability.

*Ground Combat Vehicle*

Ground Combat Vehicle (GCV) is the Army's replacement for Bradley Infantry Fighting Vehicles in Armored Brigade Combat Teams (ABCTs). Modernization imperatives include improved protection, mobility, and capacity for a full nine soldier infantry squad, and sustainment; built-in growth capacity; and network integration. The fiscal year 2014 budget request will allow the refinement of the GCV requirements set, close out the Technology Development phase, and allow the awarding of an Engineering and Manufacturing Development (EMD) contract.

*Stryker*

The Stryker Double V-Hulls (DVH) have provided exceptional protection in Afghanistan and are directly contributing to saving the lives of soldiers. The Army is procuring DVH Strykers through new production and flat bottom Stryker exchange. As of December 2012, remaining new production consists of nine Anti-Tank Guided Missile Variants scheduled for completion June 2013. Fifty-two Stryker DVHs were completed in April 2013 though the exchange process. The Army has validated the enduring requirement for the DVH Stryker configuration and an analysis is being conducted to determine distribution of the current DVH vehicles within the nine Stryker Brigade Combat Teams. The Army has approved Phase II of the Stryker Engineering Change Proposal (ECP) effort (design, prototype build, and test) focused on improving electrical and engine power, enhancing the suspension and integrating an in-vehicle network. A production decision for Phase II is projected for the fiscal year 2017 timeframe.

*M1 Abrams*

The Abrams tank remains the best tank in the world as a result of significant improvements over the last two decades. The Army will have produced enough tanks to fully meet its requirement to equip all ABCTs by June 2013. Currently the average age of the fleet is 3 to 4 years old. A slow-down in Abrams Tank production has already begun and will likely continue until the next major recapitalization of the Abrams tank resumes in the fiscal year 2019 timeframe. The Army is assessing mitigation alternatives, including the affordability of accelerating production of the Abrams ECP improvements with the next Abrams recapitalization, to provide a sustaining workload at the Anniston Army Depot and Joint Systems Manufacturing Center for the foreseeable future. In the meantime, the Army continues to aggressively apply mitigation measures to preserve critical skills and the vendor/supplier base.

*M2 Bradley*

The Army will have produced enough Bradley vehicles to fully meet its requirements to equip all ABCTs by September 2013. At this point, the average Bradley A3 and Operation Desert Storm-Saudi Arabia fleet age is 4 years old. The Army awarded the contract to convert and digitize 61 M3 Cavalry Fighting Vehicle variants to the standard M2 Infantry Fighting Vehicle in the second quarter of fiscal year 2013. The Army has two ECP efforts planned for the Bradley. ECP 1 began in fiscal year 2014 and includes mobility improvements (improved track and suspension) to restore lost platform capability due to survivability enhancements. ECP 2 is scheduled to begin in fiscal year 2017 and includes size, weight, power, and cooling improvements to accommodate inbound technologies (improved engine, transmission and alternator, network and power improvements). The Army will conduct an analysis to determine the right combination of field modifications, production at York, and work at the depot to complete the planned ECPs.

*Paladin Integrated Management*

The Paladin Integrated Management (PIM) program replaces the current M109A6 Paladin and M992A2 Field Artillery Ammunition Supply Vehicle by incorporating Bradley common drive train and suspension components with a new chassis design. PIM addresses a longstanding capability gap in the self-propelled artillery portfolio brought about by an aging fleet and the termination of prior modernization efforts. The budget request supports continued PIM Developmental Testing and Low Rate Initial Production of 18 PIM systems and non-recurring costs for the production contract.

ROTORCRAFT ACQUISITION AND MODERNIZATION

The past decade of conflict has identified challenges faced by rotary wing aircraft conducting operations in high, hot conditions, limits to aircraft/passenger survivability, and high operational costs. The Army's recent aviation modernization investments maximize AH–64 and UH–60 fleet performance.

*OH–58D/F Kiowa Warrior*

The OH–58D Kiowa Warrior provides essential aerial reconnaissance and security of ground maneuver forces and has the highest operational demand of any Army rotary wing aircraft. The budget request supports the OH–58F Cockpit and Sensor Upgrade Program (CASUP) and continues OH–58D fleet upgrades to include manned-unmanned teaming, weight reduction, and resolution of current obsolescence issues. To address long-term obsolescence in the Kiowa Warrior, the OH–58F CASUP improves avionics through modernization of: interoperability; Aircraft Survivability Equipment; armament and sensors; digital cockpit display, improved processor; navigation guidance; and communication and identification. The OH–58F CASUP capability improvements are largely centered on the Nose-Mounted Sensor, which will replace the much less capable Mast-Mounted Sensor. Additionally, CASUP will fully integrate several aircraft systems that are currently federated, redesigns, and replace the entire aircraft wiring harness, and add a capability to integrate future digital weapon systems.

*Improved Turbine Engine Program*

Improved Turbine Engine Program (ITEP) is the next generation engine being developed to reduce fuel usage, increase performance, improve reliability, and lower maintenance. The ITEP is striving for a 25 percent specific fuel consumption decrease, 35 percent production and maintenance cost decrease, 65 percent horsepower to weight increase with 20 percent engine life design increase, and may incorporate a condition-based maintenance plus package.

*CH–47F/MH–47G Chinook*

The Army is fully committed to the procurement of 533 Army CH–47F Chinook and U.S. Special Operations Command MH–47G aircraft, which are meeting or exceeding all expectations in theater. The Army plans to sign a second 5-year multi-year contract to procure the CH–47F Chinook, which will yield a cost avoidance of 19.2 percent, or $810 million.

*UH–60 Black Hawk*

The Black Hawk program continues to move forward with continued investments in modernization to keep the Blackhawk fleet relevant through 2035. Current modernization efforts include cockpit digitization and development and integration of the Improved Turbine Engine. The Army awarded the 8-year multi-year contract for Black Hawk, which has realized a cost avoidance of 15 percent, or $1.4 billion.

*Armed Aerial Scout*

The Army conducted a Voluntary Flight Demonstration (VFD) from June to November 2012 to determine if industry had an aircraft readily available that could satisfy Armed Aerial Scout (AAS) requirements. Five submissions for potential AAS solutions provided aircraft for demonstration. The Army is currently reviewing information obtained through the VFD and industry responses to Requests for Information. The Army will consider the limitations of the Kiowa Warrior, potential capabilities of the AAS, and affordability in developing its recommendation to the Under Secretary of Defense (Acquisition, Technology, and Logistics). The Army projects that it will make a recommendation in the third quarter fiscal year 2013.

As budgets decline, we recognize that it will be difficult to resource Army Aviation at the same level in the future. We continue to successfully modify, upgrade, and remanufacture existing platforms to extend the life of our aircraft and keep our aircrews safe.

DEFENSE INDUSTRIAL BASE

The Army's Commercial and Organic Industrial Base (OIB) will adjust to a new environment of constrained resources and reduced demand. The current fiscal environment poses a number of concerns for the Army to include the possible loss of critical skill sets, the loss of suppliers at all tiers, and an increase in the number of single point failures in the supply chain affecting Army logistics and OIB operations. The Army is evaluating how to leverage facility modernization efforts to preserve needed capabilities in the OIB. We continue to work with the Office of the

Secretary of Defense (OSD) on the sector-by-sector/tier-by-tier (S2T2) survey to evaluate impacts on all DIB sectors.

The Army produces Industrial Base Baseline Assessments that assess current operations, risks, and issues in the Army Industrial Base. The Army has implemented long-range facilities and construction planning for arsenals and ammunition plants, which include modernization projects to upgrade facilities, and modernizing equipment and manufacturing processes. Phase 1 of the S2T2 survey is complete, with initial data from the Army Industrial Base under review to determine critical impacts to skills, manufacturing capabilities, and expertise the Army needs.

The Army is also conducting a comprehensive Combat Vehicle Portfolio Industrial Base Study through A.T. Kearney, a global management consulting firm. The 21-week study, expected to be completed in June 2013, is assessing the commercial and organic combat vehicle industrial base, viable strategic alternatives, and sustainment of the combat vehicle industrial base in a constrained fiscal environment.

ACQUISITION TRANSFORMATION

The Army continues to prioritize affordability, sound program management, and achievable requirements in our acquisition efforts. The Army has taken specific steps to address and avert the leading causes of program cancellations in the past. Requirements and acquisition strategies in our major programs (GCV, for example) have been carefully tailored to mitigate risk and facilitate achievable results. An Army blue ribbon panel review in 2010 recommended long-term improvements to our processes. Implementation is nearly complete on this effort (55 of 63 recommendations have been implemented to date). The Army has also embraced OSD Better Buying Power initiatives designed to address cost and schedule risk in programs and achieve better value for the taxpayer.

Ongoing improvements include revising our requirements development process to facilitate cost-informed decisions on a collaborative and timely basis. The Army is also revising requirements approval processes to focus on truly "must-have" capabilities in an effort to control costs. We are also expanding the use of multi-year contracts to achieve efficiency, increasing our emphasis on mature technologies, and improving the availability of analytic research in acquisition decisions to achieve best value for the Army.

The Stryker program is one example of the effective application of "should-cost" estimates, incentivizing efficiency, and lower overall costs. The Army achieved considerable savings combining the DVH and the Nuclear, Biological, Chemical Reconnaissance Vehicle buys, while pursuing efficiencies gained in test methodology. Existing test data was effectively utilized and test events were also combined to achieve efficiency.

CLOSING COMMENTS

These are challenging times for the Nation and our Army. The next several years will be pivotal for Army ground systems and rotorcraft. The resources provided to the Army to conduct ongoing operations while modernizing and posturing for the next generation of warfighter capabilities will determine our continued ability to accomplish our mission and meet future commitments. To execute these plans, we need your continued advice and support.

We can assure the members of this subcommittee that your Army's senior leaders remain focused and are working hard to address current challenges and the needs of the Army now and in the future. We will do this with affordability as our watchword as we endeavor to remain good stewards of our Nation's resources.

Mr. Chairman, members of the subcommittee, we thank you again for your steadfast and generous support of the outstanding men and women in uniform, our Army civilians, and their families.

Senator MANCHIN. Thank you both, General Barclay and General Phillips.

Let me just start out with an observation. Being one of the newer members of the Senate, coming from the State ranks, being a governor before and being involved in the public process, if you will, the sequestration is taking on a whole new life of its own. My estimation is it's going to be here for 10 years. With that being said, I think if you look at the overall objective, it was supposed to be a draconian measure, which it really is, but I think it's more draco-

nian in the way it's administered versus the amount of money that's involved.

With that, they're talking $1.2 trillion over 10 years, to be fairly equal, if you will, half of it from defense and half of it from non-defense. That would be $500 to $600 billion over the 10-year period. So that's about $60 billion a year. Right now, since it started a little bit later this year, it's going to be deferred to the end of the back of the 10-year program, so you have $42.5 billion.

I think Senator Donnelly asked a question which I think everybody has answered the same as you, let us manage. Let us manage, and that's what you're asking for. It makes all the sense in the world. I'm sure over the years there's been programs that you have been required as a mission statement that you're going to do whether you thought it was the right program or not, and you have always carried out your mission, and I appreciate that.

What I'm saying—this is just me speaking for myself—is that I believe that we should be working with you more than telling you what to do and finding out what works and what doesn't work and let you make recommendations on some consolidation cuts and eliminations that need to be done. I think if I were you, I would plan along those lines. That's just my input, if you will.

If you're looking at over the 10-year period, you're going to have DOD spend over $6 trillion over a 10-year period, asking for a $600 billion reduction in that. So I would look forward to the long-term planning. That's just my estimation in what I'm seeing, unless we get a budget that really works. If we do get a budget that works, it'll probably be along those same lines, I would estimate. So that's my input on that.

So my questions would be along these lines. This is to both of you. If you agree on our policies—no matter whether you do agree on our policies in Iraq and Afghanistan, I think there's one thing that all of us can agree on, that the soldiers have sacrificed dearly and stepped up when so many others wouldn't. As the wars come to a close, I'm reminded of Eisenhower's words: "Neither a wise nor a brave man lies down on the tracks of history to wait for the train of the future to run over him." Pretty wise. He had a lot of wise words way back then, I think, and they're still true today.

Our soldiers have learned many lessons in Afghanistan. I think we know that too many husbands, wives, brothers, sisters, and daughters have been lost or severely injured, and we want to make sure that they're not forgotten and the lessons that we've learned should be learned and not repeated.

So I guess my question to both of you, whoever wants to start out on this: What do you think we have learned from Afghanistan and Iraq that we should heed in the future as this dangerous world unfolds in front of us?

General BARCLAY. I'll start with this and then I'll let General Phillips as he goes forward. You can probably categorize the different areas where we have learned. Every time we go into a conflict, whether it's small, large, or medium, we always have lessons that we learn, and they fall out in different areas, whether it's on the training venue, new ways to do better adaptive training to meet the actual mission set. As we know, first going into Iraq we thought we had one type of mission going in and it quickly

morphed into another type of mission, so we had to change our training strategy. So how we have become adaptive in looking at our training capabilities, how we turn the training centers around and develop them, where in the past they were revolving around the old type of warfare, decisive action, we quickly changed them.

On the equipping side, I think we've learned several good lessons. I think the Mine Resistant, Ambush Protected (MRAP) vehicle is a great example of where—typically, where it takes us anywhere from 9 to 12 to 14 years to field and get something out, we saw we had a need, we had the requirement because of the IEDs to protect these kids—as you mentioned, mine was one of those that was in an up-armored HMMWV. We didn't have MRAPs at that time. So that was something that we were able to turn in a very rapid manner outside, around the normal processes, and get that piece of equipment into the hands of soldiers and protect them better. So I think that was really one of the prime key success stories when you look at our acquisition processes and being able to get around how that normally takes us the time it takes us to put something into the hands of soldiers.

Then again, I think as we look at soldier development and individual leader development, it's hard to always categorize that, but if you look at where our Army is now as a combat-proven force and that piece of having that experience is something that we have to ensure we continue to count on and use as we move forward into the future, because that's something that you cannot discount. You've heard the Secretary and the Chief talk about the fact that we have a combat-seasoned, hardened force that is ready and flexible and adaptable to handle anything in the future.

General PHILLIPS. I would add just a couple of things. At the end of the day, our soldiers are just remarkable on the field of battle. They're the most devastating weapon in terms of engaging with the enemy and destroying them. Today it's really one Army. I think one of the things we learned over the last 12 years of war is it doesn't matter whether you're Reserve, Active, National Guard. You can't go to Afghanistan, and, sir, I know you've been over there, but you can't go to Afghanistan and look at a soldier and tell what State they're from or whether they're in the Active, Reserve, or National Guard. It's one Army today, and they get the same training, same equipment, that the Active Force does. That's important.

Jim just described really what I think is the big lesson for us on the acquisition side, which is agility in how we deliver programs, especially when it comes to soldier protection and survivability. We've learned a lot from rapidly equipping forces, from the Joint Improvised Explosive Device Defeat Organization and others. We have a very deliberate, formal acquisition process and I think we do rapid acquisition very well. In some cases, somewhere in the middle is where we maybe should be in terms of improving our processes and make sure we can deliver capability quicker. That's one of the lessons learned.

Also on the industrial base. I think at Lake City, the ammunition plant that was back in 2000, 2001, making about 300 million rounds a year, and we didn't have enough ammunition to go to war

initially in Afghanistan. We reversed that and we did it quickly. At one point Lake City was making 1.3 to 1.4 billion rounds.

So as we come out of this final phases of Afghanistan, sustaining an initial industrial base capability and making sure that's reversible is so critical.

I'll mention one other topic for me, sir, because I'm a contracting officer by trade. I've been doing this in the Army since 1985. We've learned a lot from contracting operations in Iraq and Afghanistan, a lot of hard lessons learned. We can't lose our focus on the importance of contracting in any future endeavor that we might get in, whether it's low on the spectrum of combat operations, up to major combat operations, we have to be ready.

Senator MANCHIN. I need to learn a lot more about the contracting, but at face value it doesn't make economic sense, when you look at the amount of money that we've spent on contracting or private contractors versus what the soldiers have done in the past and probably could do today. But I know there's a rationale, and I'd love to learn more about that.

But I've looked at the graph and bar charts starting from post-Korea to post-Vietnam, post-Cold War, and now as we wind down to a post-Iraq and Afghanistan. The numbers just don't add up for me. But I'm happy to sit down with both of you and maybe you can help me better understand.

What I will say is that the strategic guidance shifts away from the large-scale nation-building operations. I never thought our mission or goal was nation-building over in Iraq or Afghanistan. It's going to regionally aligned forces, conducting more regular, rational missions. If we're going to get out of that nation-building mentality and go back to war on terror and defend our country against terrorism, whatever it may be, how are you positioning yourselves? Are we taking assets out of the area that's not going to be needed for nation-building and will be used here? Will it be scrapped? Will it be lost?

A lot of people believe we just leave stuff; it has very little value to it, so it's better to leave it behind or give it to whoever in those nations than it is to bring it home. Maybe you can bring me up to speed on that.

General BARCLAY. Sir, I'll start with this. As far as our equipment retrograde coming out of theater, there's roughly about $28 billion worth of equipment in Afghanistan. We see the requirement as somewhere around $21 to $22 billion of that that we need to bring home. That's important, that we retrograde. We cannot just leave it there on the battlefield. It's important to our units and ensuring that we can keep their EOH percentages up.

Over the last 10 years we have done a great job, with the support of Congress, in being able to raise our EOH and our readiness levels of all of our components. If you look back, when we started this war the EOH for the Active Force was in the high 80s, the Guard was in the low 80s, the Reserves in the 70 percent. We are all now—the Active Force is sitting at about 91 percent of EOH, the National Guard at about 88 to 89, the Reserves about 86.

To get all of us above 90, we need to bring that equipment home and reset that. That's very critical to our way ahead.

It also then ties into the uncertainty of the fiscal environment, because if you don't bring it home then you're going to have to replace it and you'll spend more dollars by buying new and trying to figure out how you're going to equip those forces and ensure that they can do the mission sets that they're given. So that's very critical to us, that we get the money to reset that equipment also when we bring it home from theater.

Senator MANCHIN. Let me ask this question. I know we talked about the contracting, and there are certain things that I believe are best done by contractors, whether it's manufacturing. I don't believe, from the retrofitting or refurbishing—I've seen what the National Guard units can do in my own State of West Virginia, the amount of money that can be saved by them doing it, whether it's simple retrofitting the tires or rebuilding HMMWVs or whatever it may be.

I don't know what direction you are going there. Is that mostly a contract item? When you speak of contractors, are we talking about contractors that are manufacturing, refurbishing, or basically fighting?

General PHILLIPS. None of our contractors are fighting that we have under contract.

Senator MANCHIN. Or security.

General PHILLIPS. Some of them are potentially doing security.

Senator MANCHIN. Most of those, General, would mostly be retired service people?

General PHILLIPS. Some might be, sir. But it would be a combination in terms of your private security contractors.

General BARCLAY. Sir, I will add, though, if you look now, based on the fiscal uncertainty and sequestration and the CR, the cuts, the Secretary of the Army has allowed those units now that are back home to increase their borrowed military manpower. We're restricted by how much we can use. DOD gives us the levels. But we have some variances.

Senator MANCHIN. What do you mean by "borrowed manpower"?

General BARCLAY. In other words, we use soldiers to do those things that normally we would have contractors do on bases, whether it's mowing the grass, pulling KP in the mess hall, pulling security as gate guards now, picking that up, where in the past it had been contractors. So we are putting soldiers on some of those tasks that had been done by contractors.

General PHILLIPS. Sir, I would just add, the Army spent $108 billion last year on contracts. A lot of that was money from other Services as well and other agencies, not just pure Army money. But a majority of that money goes to services contracts. Under the Strategic Choices Management Review process today, we are undergoing a significant review of how we execute services contracts, not just in the Army but across all DOD. Those results of those reviews will come forward as well, sir.

Senator MANCHIN. We're being joined by Senator Blumenthal and we appreciate having him here. I know everybody's kind of cutting their times back and forth. We're just going through the questioning period, Senator Blumenthal. So if you want to go through yours, then let me know when you're prepared to ask any of your questions, we'll get right to you.

Senator BLUMENTHAL. I'm ready, Mr. Chairman.

Senator MANCHIN. You're ready to go. You came ready, didn't you, sir?

At this time we'll have Senator Blumenthal ask his questions.

Senator BLUMENTHAL. Thank you to both of our very distinguished Army generals for being here today, and thank you for your excellent service over many years to our country.

I would like to focus on the Improved Turbine Engine Program (ITEP) that addresses the Blackhawk and Apache helicopter requirements. I'm sure you're familiar with it, and the next generation of future vertical lift helicopters. I wonder if you could explain the value of the ITEP engine in meeting our current and future operational requirements and your plans to have the flyoff, which I understand will test the prototypes?

General BARCLAY. Sir, I'll start that and General Phillips may add in. The Army is committed to the ITEP engine. It's very important. It's not only important to our future, but it's also important to our current fleet of aircraft.

The goal of this engine program is, based on where we want to go with it, a 25 percent reduction in fuel consumption. Then we're also planning on a 65 percent improvement in overall power capability once it gets on the platforms, and then a 20 percent improvement in design life, with 35 percent less production and maintenance costs.

We're looking to put that in the current fleet of Apaches and Blackhawks. We have roughly 3,600 rotary wing aircraft in the Army and the Apaches and Blackhawks, they make up around 3,000. So if you're looking at replacing, that's about 75 to 80 percent of your rotary wing fleet that engine could go into.

So it's critical not only, as I said, currently, but then again because of the future technology and the improvements in those areas. We can tie that then to our future vertical lift program, which we're looking at probably somewhere in the mid- to late-30s, that program will come in, because the power gain in this engine, plus the fuel savings and maintenance costs, make it a viable candidate as it can continue to improve in technology as it moves forward to be an engine possibly on that platform.

So the ITEP engine is very important to us. Again, the concern is in this fiscal uncertainty and the sequestration stuff, all of our programs are taking cuts. Again, as we look out to the future and trying to take those programs that are into development in science and technology, we're weighing what the cost-benefits are, and the importance of bringing them.

But, sir, I will tell you that both of us are Army aviators and we can tell you that is something that we think the Army needs to stay committed to in the future.

Senator BLUMENTHAL. The benefits long- and even short-term would more than justify the costs, as I understand what you're saying.

General BARCLAY. Yes, sir.

Senator BLUMENTHAL. Even in a time when we're cutting budgets, we ought to be mindful of those cost savings and the cost-effectiveness of this program.

General BARCLAY. Yes, sir. That again, as you're looking to the future, those future dollars you can save, it's worth investing dollars today to get those savings in the out-years. This is one of those programs, as I said, will not only start providing you—for us, we're looking probably somewhere in the mid-2020 timeframe to where we can start fielding, based on where the schedule is now, but then also moving on out into the late 2030s as we're looking at future types of aircraft.

So again, this is future savings, so the dollars we're investing today we think are worth it.

General PHILLIPS. Sir, I would just add that ITEP is absolutely critical to Army aviation mid-term and long-term for future vertical lift, as General Barclay just described. We're moving forward with a Milestone A decision to formally begin this program very quickly, probably in the next 90 days or so. So we're committed to ITEP.

Senator BLUMENTHAL. Thank you.

With respect to the Blackhawk program, the 65, which I understand is the number for 2014—am I correct about that number, 65 Blackhawks?

General BARCLAY. Sir, I think you are. We're going to procure 65 as part of the multi-year contract VIII, which is the fiscal year 2012 through 2016 multi-year contract. So it's 65 now.

Senator BLUMENTHAL. Does that number satisfy your needs and requirements, General?

General BARCLAY. Sir, to be very honest with you, that's the minimum number that we can do to keep the multi-year program going. Again, these multi-year programs have brought great savings, not only the Blackhawks, but the Chinooks, great savings to our Army. So we're at the lower end to sustain that multi-year contract.

Where we were going to complete some of the Mike model fieldings, because of the fiscal constraints we are extending all these programs, bringing them down to the lowest procurement numbers. So you're going to see, I think now we're forecasting, where we thought we would be done around 2024, 2025, we're looking now to 2026, 2027, before we will complete that.

That also has an impact on the A to L conversions we're doing for some Blackhawks. We're trying to convert the rest of those. We're not going to buy all Mikes, so that A to L conversion is going to also slow down. All this is moving into the after the mid-20s to complete these.

Senator BLUMENTHAL. As I understand your answer, and you alluded to it earlier, going below 65 would entail significant risk to the program?

General PHILLIPS. Sir, I would add the way that we designed the contract with Sikorsky, as General Barclay just mentioned, has saved $1.2 billion by having a multi-year contract. So, sir, thanks to you and this committee for allowing us to go forward with a multi-year contract—great value for taxpayers and helps us sustain that important industrial base.

But the Blackhawk program in particular, I would just add is absolutely critical to the aviation modernization strategy. But as we look at sequestration in fiscal year 2014 and out, the pressure on the Blackhawk program, the Chinook program, and every other

program really is going to be significant as we look at all those programs. As we bring forward the reprogramming action that you'll see very soon, as the Army looks at the $5 billion of transfer authority that we've been given, underneath that many of the modernization programs that we currently have will be listed in that reprogramming action. That's to cover the $7.8 billion in OCO and OMO funding that has to, in some way, cover those costs of the war in Afghanistan. We have to get after that.

So we are very concerned in fiscal year 2014 and out about the impacts of sequestration, not just on aviation, but other platforms. But we will do everything possible to sustain the multi-year contract with the Blackhawk and the Chinook program. We would like that also for the Apache program as well.

Senator BLUMENTHAL. Thank you. I agree with you that these modernization programs are absolutely vital to our defense and national security needs. You can be assured of my support, my continuing support at the very least, and I hope the committee, the subcommittee's and the committee's as well.

Let me turn, if I may, to a different topic. I know you've covered a lot of ground in this hearing already, so forgive me if we're repeating some of it. But mobile electric power, which has been very useful in Afghanistan, again very cost-effective, a lot of this equipment in Afghanistan I believe may be coming back, and I wonder if you could talk about the equipment coming back and what you intend to refurbish or replace in terms of mobile electric power. Either you, General Phillips, or General Barclay.

General PHILLIPS. Sir, I would just add that we have a program manager that is working very closely with the forces in Afghanistan. We've done some incredible work on operational energy to put more efficient generators into Afghanistan, generators that reduce the need for fuel, less maintenance, less sustainment, et cetera, getting soldiers and convoys off the road, incredible work that we've done on that end in particular.

For particular generators that may or may not come back, sir, I don't have any specifics on that. We'd have to get back with you with some of those that we may or may not——

General BARCLAY. Sir, we can take that for the record and get back to you on the generators. I answered a question earlier on broad numbers. We know there's about $28 billion worth of equipment in theater. About $21 to $22 billion we need to retrograde back, and that's across the spectrum, to fill our EOH numbers against the units' requirements.

But for specifics like the generator sets, we can get back to you, sir.

[The information referred to follows:]

The Army is currently replacing the family of Tactical Quiet Generators (TQGs) with the Small Tactical Electric Power (STEP) systems, the Advanced Medium Mobile Power Sources (AMMPS), and the Large Advanced Mobile Power Sources (LAMPS) which are significantly enhanced by weight reduction (up to 10 percent), noise reduction (2 dBA) and improved fuel consumption (up to 21 percent).

The Army estimates it will return and reset 395 small, 173 medium, and 29 large TQGs currently in theater. The Army is currently working on a cost benefit analysis to determine if it is more economical to bring back AMMPS from theater or procure new ones.

The Army will replace roughly 29,171 small, 37,049 medium, and 859 large TQGs with STEP, AMMPS and LAMPS respectively.

Senator BLUMENTHAL. Thank you. I'd appreciate that additional information.

Finally, let me just return, or really continue, on the equipment issue. I don't know whether the unmanned helicopters that have been used for supply of our forward operating bases in many instances are under your command, but I wonder if you could talk about that program, if you have any knowledge of it.

General BARCLAY. Sir, that's not an Army program; that's a Marine Corps program. All of our Unmanned Aircraft Systems are unmanned. We do not have the resupply cargo one. That is a Marine program that they're testing and working with what they have in theater, trying to develop that.

Senator BLUMENTHAL. Do you have plans for either experimenting with that kind of program or——

General BARCLAY. Currently we do not, sir. That is not a requirement that we have in the Army.

Senator BLUMENTHAL. Thank you.

Thank you very much to both of you again for your information here today, and thank you, Mr. Chairman.

Senator MANCHIN. Thank you, Senator.

Let me, just a couple clarifications, and then if you have any closing statements or comments we'd love to hear from you. The OCO, some people refer to that as "loco money", because if you look at the accounting procedures of how that happens it's kind of hard to really get a handle on.

But with that being said—and I don't mean that in a disparaging way at all—but to use the $85 billion that was required for the sequestering on defense and nondefense, to come out of the OCO money. Did you follow that at all, and how much damage would that have done if we start pulling money out of OCO?

General BARCLAY. Sir, with sequestration, I can get the numbers back to you, but there were some parts of that OCO that was cut based on——

Senator MANCHIN. We know that, and I think there's a requirement of $8.5 billion that you requested.

General BARCLAY. Well, we had $7.8 billion in shortfall the Army has——

Senator MANCHIN. Right.

General BARCLAY.—against our OCO. That was part of that $18 billion, and that $7.8 billion is the remaining left in OCO and OMO costs that we're trying to cover. Part of that will be the reprogramming action that's coming in, and that will cover about $5 billion of our $7.8 billion shortfall.

Senator MANCHIN. If I'm hearing you accurately, you're saying even with 2014, as we approach 2014 for the drawdown and leaving Afghanistan, it's going to be quite expensive for us to do it right.

General BARCLAY. Yes, sir. We know that the costs don't become less as you're retrograding. Historically, we can show coming out of Iraq that your costs go up in your last 12 to 14 months.

Senator MANCHIN. Do you have any accounting at all on how many contractors that are still in Iraq and how many we still have in Afghanistan? Do you have any idea?

General PHILLIPS. Sir, I can get you the exact numbers. Very few in Iraq. We look at those numbers periodically.

As of May 1, 2013, the Department of Defense (DOD) had approximately 102,556 contractor personnel supporting the mission in Afghanistan. As of May 8, 2013, DOD had approximately 11,748 contractor personnel supporting the mission in Iraq.

The number of contractors in Afghanistan is reported by the U.S. Forces-Afghanistan, Operational Contract Support Drawdown Cell, while the source of the number of contractors in Iraq is the DOD Synchronized Predeployment and Operational Tracker.

Senator MANCHIN. As far as Iraq goes, we don't have much of a presence left in Iraq?

General PHILLIPS. For contractors, it would be——

Senator MANCHIN. Or military?

General BARCLAY. No, sir. It's a very small number.

General PHILLIPS. Afghanistan, sir, I believe it's a little over 100,000 contractors that are over there today.

Senator MANCHIN. We have more contractors than we do men and women in uniform, correct?

General PHILLIPS. Yes, sir. It's about 1.3 or 1.4 to 1 in terms of what contractors are doing, base support, life support, mess hall operations.

Senator MANCHIN. I understand, and that's my problem, but I'm just trying to get a handle on that.

But can you give me your evaluation on Iraq? Do you have any thoughts on Iraq, where we are today with the country and with what we've spent and what we've sacrificed there? Just a fair evaluation from a military standpoint?

General BARCLAY. Sir, I'd like to take that for the record and get back to you.

[The information referred to follows:]

Sir, what we need is a full contingent of Gray Eagles that would outfit our 10 divisions with maybe some spare assets available as necessary. But the reduction, I don't know, I have to research this. Some of that reduction might be due to sequestration.

The Army had requested 19 aircraft and associated ground support equipment in the fiscal year 2013 President's budget request. The Appropriations Act funded the 15 aircraft and associated ground support equipment. The fiscal year 2014 President's budget requests 15 aircraft and associated support equipment. With the late appropriation, the Army did not have an opportunity to modify the President's budget 2014 request to adjust for the loss of four aircraft and associated ground support equipment from the fiscal year 2013 Appropriation. During the budget briefings to the professional staff members, the Army requested committee support to permit the Army to purchase four additional aircraft with fiscal year 2014 funding by shifting some other requirements into fiscal year 2015. The House Armed Services Committee has supported that request. These adjustments will allow us to complete our purchase of 152 aircraft and associated ground support equipment that supports the Chief of Staff of the Army's equipping strategy.

Senator MANCHIN. I don't want to put you on the spot. I know it's very delicate.

General BARCLAY. Sir, if 2 years ago when I was working in the G–3 operations side and watching the day-to-day operations, I probably would have been more up to date on all this.

Senator MANCHIN. Let me just say for the general public—and I'll just use my little State of West Virginia, a very hawky State. We think that Iraq's not in any better shape today than it was when we got there, and that we don't have any more influence or

control, or maybe not as much or even less than what we had before, and Iran has a better foothold than we do.

I want to be accurate when I speak to my constituents from a military standpoint if I could some time. So I'd be happy to talk to you about that.

General BARCLAY. Sir, again, we'll take that for the record. I'll get General Huggins, the G–3, and we'll come over and set up with you.

Senator MANCHIN. Sure. If you can do that, I would appreciate it, General.

General BARCLAY. We'll give you an update from our perspective, and also the G–2, General Laguerre, who can give you more of an insight from the intel picture.

Senator MANCHIN. This is one of the things; what did we learn from our past experiences—Korea, Vietnam, Cold War? You have to learn from every experience. This has been quite costly in so many ways, human suffering and loss of life and also money involved, invested by our country.

General BARCLAY. We'll take that on, sir.

Senator MANCHIN. Okay. The other thing—go ahead.

General PHILLIPS. Could I just make one statement?

Senator MANCHIN. Sure thing.

General PHILLIPS. Just to make clear, I mentioned the Strategic Choices Management Review that's ongoing. The Army's leading the Services contracts piece of that I mentioned earlier. I wasn't clear, but the intent under Secretary Hagel's leadership is to look deeply at how all of the Services are using Services contracts and contractors and to come forward with better strategies to be more efficient, more effective, less costly, and only ensure that we're contracting for those things that the Services truly need. So you'll see some changes coming forward with that review.

Senator MANCHIN. I felt that and that's why I supported Secretary Hagel as much as I did, for that reason.

If I could go back to the Apache transmission, that Northstar of Canada, and I understand the financial problems. It just doesn't make a lot of sense contractually from a business standpoint of where we are in that whole procurement: Boeing being responsible for a complete project, a complete platform being delivered, General Phillips, and now we're accepting it, I understand, we're accepting the delivery, and then we're allowing them to come back and retrofit it with the transmission.

How much of a risk factor is in that? Just on face value it doesn't make like it's a good business arrangement.

General PHILLIPS. Sir, I want to assure you and the committee that this is a good business arrangement.

Senator MANCHIN. It is?

General PHILLIPS. It's very good for the taxpayer, simply from this perspective. If you look at the Apache industrial base—and I was in the plant back in 1985 when it first started in Mesa.

Senator MANCHIN. Right.

General PHILLIPS. I've been out there periodically. I've flown the aircraft. World's greatest attack helicopter. If you look at the extensive industrial base that has supported that from the very beginning, it's about 300 companies over 41 States. Even in the State

of West Virginia there's companies that support the Apache production.

Senator MANCHIN. Right.

General PHILLIPS. About 20,000 people across the United States and elsewhere in the world support the production of that aircraft. If we were to stop production of the Apache program, it would impact the production line and it would impact many of those 300 companies and 20,000 workers, and then you would start laying workers off, and that would cost the taxpayers more.

The other piece I would emphasize is this doesn't cost the government anything, to allow Boeing to have a rotatable pool of transmissions to take the aircraft off the production line. We do all the test flights. That reduces the timeline to accept the aircraft. Then they may sit on the ramp for a period of time, and then we actually put another transmission in the aircraft and we take them away.

Also there is FMS, sir. It's important for our allies. 11 countries today fly the Apache program. Korea just signed for another 36. It's important that we keep the production line going.

We are working closely with Boeing and Northstar. I had the president of Boeing Mesa or the vice president of Boeing Mesa——

Senator MANCHIN. Do you think contractually Boeing has full responsibility and the U.S. taxpayer and DOD is held harmless, with the contractual arrangement you have with Boeing?

General PHILLIPS. Sir, it would cost us nothing, not one penny.

Senator MANCHIN. I know that. But I'm saying the liability factor.

General PHILLIPS. Boeing is responsible for their sub-tier contractor, which is Northstar, sir, as you mentioned, and they're responsible for the management of that, and they've taken on that responsibility. We've allowed them to have this rotatable pool of——

Senator MANCHIN. You feel confident there's no liability? They don't have any protections through their subcontracting agreement that would hold them harmless?

General PHILLIPS. Sir, Boeing is fully accountable today under the contract to deliver a complete aircraft. What this does is it essentially allows us to sustain that important industrial base.

By the way, sir, I'd just add, the aircraft industrial base as a whole is one of the strongest in the Nation in terms of capability, and we want to sustain that strength.

Senator MANCHIN. The bottom line on the Lakota is we all probably have strategically something being manufactured in our State. But I think we've gotten to where the rubber hits the road. We can't force you to do something that doesn't make sense.

General PHILLIPS. Yes, sir.

Senator MANCHIN. I can't be worried about if the taxpayer support something that's not needed. I think we've gone beyond that point, and now we have to get down to is it needed, is it something strategic, is it an asset that has value? That's why we have to look to you for expertise. So we're asking you questions that might seem a little bit out of the ordinary or redundant, but I don't have a problem, if my State's doing something, that we can do it better

and we can make it more cost-effective for our country, we want to do that.

But I understand the Lakota is off-the-shelf. When I was Governor, I flew in the Bells and did everything, so I understand. You can probably go and buy this off the shelf for the mission that you want it to be used for, correct?

General BARCLAY. For the permissive environment. That's why we bought it off the shelf——

Senator MANCHIN. That's right.

General BARCLAY.—because it could do that mission.

Senator MANCHIN. So you don't feel compelled to keep that——

General BARCLAY. It can't perform the mission of the AAS. The question is, you can't take a permissive aircraft, non-combat aircraft, and put it into a combat environment.

Senator MANCHIN. Exactly.

General BARCLAY. So that's the challenge with that airframe. But again, as I said, we have met the requirements again that the National Guard and Reserve component needed, so all those requirements across the States have been met. We made that decision purposely that it would only impact the Active component because we can cover that small, 31-aircraft number with the Blackhawks as we redeploy.

Senator MANCHIN. I just think that you truly have a window here to bring to us a common sense business plan that makes sense and that we can defend and not perpetuate just because of where we come from and who does what. I would urge you to do that, because you're going to be held accountable for the money and also for the sequestration or basically the whole financial atmosphere that we're in right now, and it's going to be for some time.

So with that being said, I have a lot of little questions here, but we can talk about that when you come over. If I can sit down and talk to you on the contracting and also on the evaluation of Iraq and where we are and what it looks like it's going to end up in Afghanistan, I would be very appreciative to hear your comments. If you would come to my office, I would appreciate that.

If you have any closing statements at all, we'd be happy to, any comments for the record that you want to put in.

General BARCLAY. Sir, I just want to make one short comment. We've talked about, and you have addressed it, but the challenges of the future. We're dealing with 2013 issues now and I know you're aware of what the Secretary and Chief talked about, and all of those things that we pushed off and have not been able to do in 2013 because of the cuts then rolled into 2014, which then will roll into 2015.

It's a cascading effect, and that's why it's critical as we look ahead to allow us to have some of that flexibility so we can start doing more than just year to year, because again it pushes. We've already diverted reset from 2013 that we couldn't afford because of sequestration, which now rolls into 2014. So again, we've been telling everyone that it's 3 years after we come home, but as we keep pushing that it could go again. So I just want to reiterate that that's a——

Senator MANCHIN. I'm giving you my best evaluation and observation: if the $1.2 trillion that is sequestered over 10 years is sup-

posed to accomplish and achieve, we will end up doing that. This is my observation. You can talk to other people. I think it'll happen in some way, shape, or form.

If we know it's going to happen, then we should allow you for that planning over a 10-year period with a budget request and what you think it requires to run DOD to defend this Nation, keep the strength of our Nation, and the defense of our Nation as a high priority, to be able to do it in the most, I think, the most common sense fashion. That's what I'm looking for.

But I don't see anybody going back, because if we put a grand bargain together, it'll still have cuts to defense.

General BARCLAY. Yes, sir.

Senator MANCHIN. If we don't put it together, we're forced to buy what we weren't able to do on our own. Right now, with the toxic atmosphere we have, coming to any type of agreement makes it very difficult. The quicker we can acknowledge and let you start your 10-year planning, long-term planning, and let's work with you and start eliminating things, start consolidating things, and start making sure that we have the assets and the resources that are needed for our country, we'll be a much better country.

So I hear you loud and clear, and we'll look forward to meeting with you.

So, without any further comments—General Phillips?

General PHILLIPS. Sir, I would just like to thank you, Mr. Chairman, and this committee for your extraordinary support for our courageous men and women in uniform. Thank you.

Senator MANCHIN. I can't speak enough accolades from this committee or the Senate as a whole and I think Congress as a whole. It's just amazing what you continue to do and the sacrifices that are made for this country and the people in this country. I just want you to know it's not going unnoticed and it's not going unappreciated, and it'll always be the first and foremost thing we speak about.

My State of West Virginia is extremely proud to be part of this, and the people that have served are extremely proud to be a part of the greatest military might the world has ever seen, and we want to make sure we stay that way, but we want to make sure we also put you in a common sense position that we don't make irrational decisions and we learn from our mistakes.

But thank you so much and God bless you all. Thank you.

This hearing is adjourned.

[Questions for the record with answers supplied follow:]

## QUESTIONS SUBMITTED BY SENATOR BILL NELSON

### RETROGRADE AND MODERNIZATION OF VEHICLE RESTRAINTS

1. Senator NELSON. General Phillips and General Barclay, as the Army brings back all of this war materiel from Afghanistan and goes through the process of retrograde and repairing that equipment, the Service is looking closely at the lessons learned from the current conflict. As an example, the prevalence of improvised explosive devices has produced changes in vehicle armor and fire suppression. It could produce further changes in the way vehicle restraints are designed. I urge the Army to use the retrograde opportunity to ensure that vehicle restraint systems are modernized to reduce the injuries encountered in future conflicts. Can you share your thoughts on the current state of vehicle restraints and will they need modernization?

General PHILLIPS and General BARCLAY. The Army is committed to maximizing soldier safety in our Tactical Wheeled Vehicle (TWV) fleet. Based on lessons learned during the conflict, the Army has already incorporated or may incorporate the following vehicle restraints into its TWV fleet based on available resources:

1. Mine Resistant, Ambush Protected (MRAP): The MRAP program has upgraded the seating and restraints in a majority of the variants that were originally fielded. The current seating/restraint configuration represents the latest and most advanced seating and restraints available and were incorporated as part of the MRAP All-Terrain Vehicle's (MATV) Underbody Improvement Kit upgrade and the MaxxPro Dash's MaxxPro Survivability Upgrade. All Army MRAP enduring requirement platforms (with the exception of the MaxxPro Long Wheeled Base (LWB) Ambulance) will be equipped with this seating/restraint system. These specific seats are not dimensionally configurable to the ambulance mission and therefore efforts are currently underway to identify the best performing seating/restraint system for the MaxxPro Ambulance. This 'best solution' will be integrated into the MaxxPro LWB Ambulance during reset activities.
2. Route Clearance Vehicles: All Panther vehicles will have highly capable Gunner Restraint Systems installed. All joint explosive ordnance rapid response vehicles were upgraded from a push to release automotive four point harness to a rotary/cam release four point harness, and also added gunner restraints and blast attenuating seats with 5-point cam release inertial locking seat belts. RG–31 vehicles already have 5-point seat restraints and blast attenuating rear crew seats. During RG–31 recapitalization, the Gunner Restraint System will have the restraint pass-through hole on the gunner stand modified to allow for better restraint travel, and the existing Objective Gunner Protection Kit (OGPK) bearing will be replaced by the slew bearing in order to better restrain the OGPK. The Husky Seat Upgrade kit installed in Operation Enduring Freedom (OEF) incorporates a 5-point harness to increase soldier comfort and safety. The Army is considering including this seat upgrade for the Husky Program of Record fleet.
3. Heavy Tactical Vehicles (HTV): The Army began installing and fielding underbody armor kits (C-kits) for the Heavy Expanded Mobility Tactical Truck and Heavy Equipment Transport vehicles in OEF starting in August 2011 in response to urgent warfighter requirements for increased underbody blast protection. C–Kits for Line Haul Tractors and Palletized Load System are in development. C-kits include blast attenuating seats that utilize 5-point restraint systems integrated into the seat structure. Restraint systems integrated into the seat structure have been proven to increase survivability in underbody blast events vice a traditional 3-point restraint system anchored to the cab B-pillar. Future armor solutions for HTVs that include blast attenuating seats will utilize seat restraints that are integrated into the seat structure. Additionally, blast attenuating floor mats were also incorporated into each C-kit to complement the seat and restraints and to reduce the chance of injury to the occupant's legs.
4. Family of Medium Tactical Vehicles (FMTV): The restraints used in FMTV production meet all FMTV live fire testing requirements and are compatible with Federal Motor Vehicle Safety Standards and U.S. Department of Transportation requirements. No modernization of restraint systems is projected in remaining production of the FMTV (approximately 3,000 trucks). However, based on user feedback, the Product Office developed a restraint system to improve soldier comfort. Drawings have been produced for this configuration and are in the Technical Data Package for future recapitalization efforts, should additional funding become available.
5. Light Tactical Vehicles: Regarding crew restraints, as part of the Modernized Extended Capacity Vehicle-Automotive and Modernized Extended Capacity Vehicle-Survivability efforts, the product office is considering airbag integration to restraints as well as other parts of the vehicle to mitigate the likelihood of injuries sustained during blast and rollover events. The High-Mobility Multipurpose Wheeled Vehicle currently has a three-point restraint system for the occupants, excluding the gunner position. Improved seats with energy absorbing features as well as five-point restraints are being evaluated to assess improved occupant protection capabilities that are available for vehicle integration onto existing platforms. Regarding gunner restraints, the vehicles are currently equipped with the Gunner Restraint System but the product office is considering upgrading vehicles with the Improved Gunner Restraint System to be common with the MRAP family of vehicles.

6. Joint Light Tactical Vehicle: The program office is evaluating advanced blast attenuating seats with energy absorbing features as well as five-point restraints to assess improved occupant protection capabilities. Each of the three Engineering and Manufacturing Development vendors must select these components and integrate them into their vehicles to meet soldier protection requirements and remain within overall affordability goals for the vehicle. The program intends to periodically evaluate upgrades to these key safety components during production and sustainment.

JOINT TACTICAL RADIO SYSTEM

2. Senator NELSON. General Phillips and General Barclay, despite the Army certifying in November that they would move to competition during full-rate production of the Joint Tactical Radio System (JTRS), a third low-rate initial production (LRIP) buy of 3,100 radios is scheduled for delivery in January 2014. This LRIP would be from General Dynamics and not open to competition. A 2013 Government Accountability Office report states that, "The Manpack radio has not yet demonstrated an Army-defined reliability requirement enabling it to have an 86 percent chance if completing a 72-hour mission without an essential function failure. Department of Defense (DOD) test officials reported that the radio was not operationally effective or suitable based on the recent testing that concluded in May 2012. In October 2012, DOD testers reported that the Manpack radios only demonstrated a 64 percent chance of meeting reliability requirements under benign conditions." In light of the performance issues associated with the Manpack radio, it would seem that competition on production would be beneficial and enhance quality. Can you speak to your commitment to compete the JTRS?

General PHILLIPS and General BARCLAY. The Army remains committed to conducting a full and open competition for the Handheld, Manpack, and Small Form Fit (HMS) radio. The competition will be open to current and new industry partners in compliance with the 2012 National Defense Authorization Act (NDAA). The Army has already initiated the solicitation process by releasing a draft Production Requirements Document and Request for Information (RFI) to industry.

Industry feedback was that the interested new industry partners could not be ready to submit production-representative prototypes for government qualification testing prior to January 2014. In order to prevent a break in the current program production, the Army is planning to increase the total LRIP from the currently qualified industry partners to 10 percent of the planned acquisition objective while the new industry partners prepare for the required qualification testing.

According to industry feedback to the RFI, conducting the qualification testing prior to January 2014 would likely result in only the two currently qualified producers responding to the solicitation.

3. Senator NELSON. General Phillips and General Barclay, if the performance of the Manpack radio is lacking, why would you continue procurement in a non-competitive manner with an additional LRIP?

General PHILLIPS and General BARCLAY. The PRC–155 is currently the only National Security Agency certified two-channel manportable radio capable of operating the required waveforms. Performance and reliability of the PRC–155 have improved since the 2012 Defense Operational Test and Evaluation operational assessment, as verified by government testing conducted by the Electronics Proving Ground (EPG) Distributed Test Team. The Army has requested additional procurement, under LRIP of the PRC–155 radio until our industry partners can be ready for a full-and-open competition.

4. Senator NELSON. General Phillips and General Barclay, the Army has been struggling with developing the JTRS radio variants for many years. What was the catalyst for the change in strategy to move to commercially available alternatives to address the JTRS requirements?

General PHILLIPS and General BARCLAY. The 2012 NDAA mandated a change in acquisition strategy for the HMS program. The 2012 NDAA directed the Army to conduct a full-and-open competition for HMS radios in full rate production. The previous HMS acquisition strategy planned to compete full rate production orders among the current two qualified program of record vendors.

The Army acknowledges that industry has made significant technological improvements in software defined radios over the past several years due in large part to the efforts to fill operational gaps in Afghanistan and Iraq. An assessment of the radio market identified potential vendors other than the program of record vendors

that are able to compete with their hardware operating government-owned waveforms.

MANPACK RADIOS

5. Senator NELSON. General Phillips and General Barclay, DOD test officials reported that the Manpack radio was not operationally effective or suitable. In previous testing, the Manpack demonstrated poor reliability, achieving only 162 hours of mean time between essential function failures versus a requirement of 477 hours. Despite reliability deficiencies, the Office of the Secretary of Defense authorized additional LRIP quantities of Manpack radios. What is the Army doing to address the shortcoming in reliability, operational effectiveness, and suitability?

General PHILLIPS and General BARCLAY. The contract to procure the PRC–155 Manpack Radios is a firm, fixed price contract which requires the contractor to correct the deficiencies noted in the 2012 Department of Operational Test and Evaluation operational assessment as well as those documented during structured government testing conducted at the EPG. The contractor must correct all these deficiencies at no expense to the government. The corrected deficiencies are being verified by a series of government tests conducted at EPG, and ultimately will be verified by an operational Verification of Corrected Deficiencies to be conducted by the Army Test and Evaluation Command in Fiscal Year 2014.

6. Senator NELSON. General Phillips and General Barclay, what strategies are in place to help ensure that the Army manages the inherent risk in procuring additional radios that have not met reliability thresholds?

General PHILLIPS and General BARCLAY. The contract to procure the PRC–155 Manpack Radios is a firm, fixed price contract which requires the contractor to correct the deficiencies noted in the 2012 Department of Operational Test and Evaluation operational assessment as well as those documented during structured government testing conducted at the EPG. The contractor must correct all these deficiencies at no expense to the government. The corrected deficiencies are being verified by a series of government tests conducted at EPG, and ultimately will be verified by an operational Verification of Corrected Deficiencies to be conducted by the Army Test and Evaluation Command in Fiscal Year 2014. The contractor is required to retrofit any required modifications to all LRIP PRC–155 radios at no expense to the government.

RIFLEMAN RADIOS

7. Senator NELSON. General Phillips and General Barclay, the Army is in a similar situation with Rifleman radios in buying additional radios that have not come close to meeting reliability requirements. A July 2012 Acquisition Decision Memorandum (ADM) authorized competitive full-rate production of the Rifleman radio and approved additional LRIP quantities. What is the Army doing to ensure that radios procured in response to the July 2012 ADM are more reliable than earlier radios?

General PHILLIPS and General BARCLAY. Since July 2012 and during LRIP, General Dynamics and Thales have continued to develop the Rifleman radio and have upgraded radio software four times. Additional testing since July 2012 has stressed upgraded radio reliability and functionality. The Army will not be able to independently attest to the reliability of systems of new industry partners prior to the full and open competition. During the full and open competition for production of the Rifleman radio, all competitors will undergo Qualification Testing for requirements such as call/message completion, range, battery life, weight and Soldier Radio Waveform backwards compatibility prior to contract award. Initial Operational Test and Evaluation to measure reliability will be conducted after contract award and prior to a full rate production decision.

8. Senator NELSON. General Phillips and General Barclay, one of the Rifleman radio's key performance parameters is Position Location Information (PLI), the ability to automatically transmit a soldier's position location to team and squad leaders. The soldier's PLI is calculated using a Global Positioning System (GPS) receiver embedded in the Rifleman radio. To address concerns about the spoofing of commercially-based GPS receivers providing misleading information, DOD policy generally requires all user equipment acquired after October 1, 2006, to employ the military's Selective Availability/Anti-Spoofing Module (SAASM). However, due to cost and

power constraints of SAASM, the first increments of the Rifleman radio were granted a waiver to employ commercial GPS. What is the status of this waiver?

General PHILLIPS and General BARCLAY. A February 23, 2012, memorandum for Assistant Secretary of the Army (Acquisition, Logistics and Technology) from the DOD Chief Information Officer approved the Army's request to use commercial GPS Standard Positioning Service (SPS) receivers in Rifleman radios. The waiver is valid through fiscal year 2016 for a quantity of 70,000 radios. The Army's waiver request is supported by a risk mitigation strategy. The Army is authorized to use the Rifleman radios GPS SPS capability as long as the Army Deputy Chief of Staff G–3/5/7 is willing to accept the residual risks associated with SPS use.

9. Senator NELSON. General Phillips and General Barclay, how many Rifleman radios will be procured under this waiver?

General PHILLIPS and General BARCLAY. The Army plans to procure approximately 41,827 radios through fiscal year 2016 under this waiver and may procure up to 70,000 Rifleman radios.

LRIP 1 authorized the procurement of 6,250 Rifleman radios. The LRIP 2 authorized the procurement of 13,077 Rifleman radios for a total of 19,327 radios. The Rifleman radio procurement contract will be an Indefinite Delivery/Indefinite Quantity contract that will provide the potential for the Joint Services to procure up to 150,000 Rifleman radios over 5 years. The Army plans to procure approximately 7,500 radios per year (22,500 during the waiver period through fiscal year 2016 for a total of 41,827 radios (19,327 LRIP radios, 22,500 production radios). In accordance with the Waiver to Procure GPS SPS Receivers for Rifleman radio dated February 23, 2012, the entire waived quantity of 70,000 radios will be available and may be procured by the Army pending the availability of funding.

10. Senator NELSON. General Phillips and General Barclay, what are the Army's current plans to develop and incorporate a SAASM-based solution into future increments of the Rifleman radio?

General PHILLIPS and General BARCLAY. The Army is required to use GPS Precise Positioning Service (PPS) signals to meet the PLI Key Performance Parameter in the Joint Requirements Oversight Council approved Rifleman Radio Capability Production Document. The Army requested the GPS waiver for the Rifleman radio since there is not an affordable SAASM-based solution into that can be embedded in the Rifleman radio. The Army views use of GPS SPS as an interim solution to meet the operational requirement until an affordable and operationally effective PPS capability is available. The Army is not funding the development of improved PPS technology through the Program of Record. The program manager is continuously assessing the state of PPS technology size, weight, power, and cost and all radios must demonstrate the ability to incorporate a PPS capability into their design in order to qualify for participation in the full and open Rifleman radio contract award. The program manager will determine, based on the state of the technology and the Army's position on operational risk acceptance, whether to incorporate this capability in future procurements.

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## QUESTIONS SUBMITTED BY SENATOR JOE MANCHIN III

### MODERNIZATION OF ARMY RESERVE AND NATIONAL GUARD

11. Senator MANCHIN. General Barclay, a widely recognized outcome of a decade of war in Iraq and Afghanistan is the increased reliance of all Active components of the Armed Forces on their Reserve component counterparts. The Reserve components have always been part of the operational force. They are organized and equipped to provide personnel and units available for deployment in support of operations around the world. However, there is talk now of the Reserve component as an operational reserve rather than a strategic reserve. Operational reserve is not a doctrinally defined or agreed upon military term, but it implies a reserve capability relevant to the support of a theater commander's conduct of missions and on timelines at the operational level of war. A further implication, again nowhere defined in doctrine or in policy, is that the Reserve component, as an operational reserve, may be needed at a higher than perhaps traditional level of readiness prior to mobilization. What in the Army's view does it mean for the Reserve component to be an operational reserve?

General BARCLAY. "Operational reserve" is a shorthand term used to describe the imperatives outlined in the DOD Directive entitled "Managing the Reserve Component as an Operational Force" and further codified in the Army Total Force Policy.

The Army interprets these directives as an imperative not to lose the gains made in Reserve component readiness, equipment, and experience by continuing to employ Reserve component forces to meet combatant commander operational requirements in a fashion that is predictable and sustainable, within the resources afforded to us. Prudent use of those resources allows the Army to minimize challenges to interoperability between the Reserve and Active component during future crises, while providing valuable leadership development and experience to members of the Reserve component. This improves their overall capability and increases the deterrence value of the Total Army.

12. Senator MANCHIN. General Barclay, what considerations do you take into account in determining the pace and scope of modernization and equipping the Army's Reserve components?

General BARCLAY. The Army's equipping guidance complies with DOD Directive 1200.17, which states the "Reserve components will be equipped to provide the operational capabilities and strategic depth required of an operational force." This means they will be "consistently and predictably equipped" and that the "priority for the distribution of new and combat-serviceable equipment, with associated support and test equipment, shall be given to units scheduled for mission deployment or employment first, regardless of component." The pace and scope of equipment modernization for the Army is defined by the Army Equipment Modernization Strategy (AEMS) and equipment programming priorities are addressed by the Army as a whole which factor in overall equipment age, interoperability, and deployment needs.

Other considerations regarding the Reserve components include ensuring equipment loaned to other components is replaced, and sufficient equipment for domestic missions is on hand. Ensuring equipment loaned from the Reserve components to the Active component results in the development of a replacement plan and a memorandum of agreement signed by both the losing and gaining components, as directed by DOD Instruction 1225.06 "Equipping the Reserve Component". For domestic missions, the Army develops equipment fielding plans that provide the Army National Guard (ARNG) and U.S. Army Reserve (USAR) with equipment that has been deemed critical to the execution of Homeland Defense and Defense Support to Civilian Authorities missions. The Army's goal is to equip these units to no less than 80 percent of their Critical Dual-Use (CDU) requirement.

Army leadership recognizes that the Reserve components play a critical role in meeting Army force requirements and that the Reserve components are an essential part of the Total Force. The Army ensures that Reserve component equipping requirements are addressed in all equipment distribution and modernization plans.

13. Senator MANCHIN. General Barclay, how would you characterize the last 10 years of modernization efforts for the Army's Reserve components?

General BARCLAY. The Reserve Forces have been critical to the success of the Army over the past 10 years. The decision to make the Reserves an operational vice strategic force has resulted in near parity for equipment on hand (EOH) and comparable improvements in modernization. The EOH levels for individual components as of December 2012 are: the Active component (AC) at 91 percent, ARNG at 89 percent, and the USAR at 86 percent. The modernization levels for the individual components as of December 2012 are as follows: AC at 72 percent, ARNG at 71 percent, and the USAR at 65 percent. Shortages of modernized equipment still exist and the Army, as a whole, works together to improve modernization levels across the force, regardless of component. To mitigate shortages, the Army moves equipment and uses Theater Provided Equipment/Army Preposition Stocks to provide each deploying soldier or unit, regardless of component, the most modern equipment.

14. Senator MANCHIN. General Barclay, how would you describe the Army's process for requirements determination, prioritization, programming, and execution of the Reserve component's modernization strategy?

General BARCLAY. The Army uses established processes found in Chairman of the Joint Chief of Staff's Instruction 3170.01H (10 January 2012): Joint Capabilities Integration and Development System to determine the required capabilities for both the Active and the Reserve components.

Equipment programming priorities are addressed by the Army as a whole, not by component. The Army's highest programming priorities are focused on improving soldier capabilities, enabling the network to conduct mission command, and remaining prepared for decisive action. These high priority requirements apply to both the Active and Reserve components. A special emphasis is placed on resourcing systems

for the Reserve components that have a CDU mission for defense support to civil authorities, such as trucks and communications equipment

Developing materiel capabilities is accomplished in accordance with DOD Instruction 5000.02, Operation of the Defense Acquisition System. The procedures used are the same for all components.

Execution involves the actual distribution and redistribution of equipment, based on Army priorities, and is achieved through a collaborative process with all stakeholders—Active and Reserve. The overall process has undergone a significant improvement in transparency for all stakeholders. The Army tracks procurements and deliveries to components and reports progress annually to Congress using the Equipment Transparency Report.

15. Senator MANCHIN. General Barclay, what are the current agreed-upon modernization strategy and priorities for the USAR and ARNG and are these priorities documented? If so, where?

General BARCLAY. The Army organizes, mans, trains, and equips the Active and Reserve components as an integrated operational force to provide predictable, recurring, and sustainable capabilities. The Army Equipment Modernization Plan and the AEMS provide the agreed-upon strategy and priorities for the Total Force, which encompasses the AC, the USAR, and the ARNG. The Army's equipping strategy ensures that the procurement and equipping processes enable the total force to perform its missions regardless of component. This strategy focuses our efforts on supporting soldiers and small unit formations while maintaining our advantages to deter and defeat potential adversaries. The key to this strategy is procuring equipment that is versatile and tailorable, yet cost-effective and affordable. The Army Equipment Modernization Plan 2014 summarizes the Army Research, Development, and Acquisition for 10 capability portfolio areas and the Science and Technology portion of the fiscal year 2014 President's budget request. The plan reflects the Army's modernization priorities: the soldier and squad, the network and enhanced mobility, protection, and lethality.

16. Senator MANCHIN. General Barclay, in your view, what risks do the Budget Control Act and sequestration pose to achieving this strategy?

General BARCLAY. Sequestration is dramatically affecting Army modernization programs. The resources provided to the Army to conduct ongoing operations while modernizing and posturing for the next generation of warfighter capabilities will determine our continued ability to accomplish our mission and meet future commitments.

While the Army today is better modernized and equipped than at any time in recent memory, "fiscal realities endanger the progress we have made in equipping."

The fiscal reductions caused by sequestration are occurring much sooner and at a much steeper rate than anticipated. As a result, all acquisition priorities and many equipment modernization programs may face unanticipated schedule or cost impacts in the out-years, including the modernization of the USAR and ARNG.

Budget Control Act funding reductions will require cancelling or reducing depot-level equipment maintenance, including the reset of materiel returning from deployment.

The fiscal realities of sequestration have caused the Army to make tough choices in almost 100 of our acquisition programs. Among the changes in the President's fiscal year 2014 budget request is the restructure of over 35 programs, the delay of 50 programs, and the removal of funding from nearly 10 others. The Army reexamined the affordability of some programs and is assessing options for less-costly alternatives to others.

17. Senator MANCHIN. General Barclay, what are the risks to your highest priority Reserve component modernization programs?

General BARCLAY. A lack of adequate funding needed to procure modernized equipment and to maintain the industrial base is the primary risk the Army faces in an era of constrained resources; specifically, the Army needs additional funding to accomplish its highest modernization priorities.

The priorities for the total Army force are to enhance soldiers for broad Joint mission sets. The Army will accomplish this by providing advanced technologies that help protect and unburden the soldier, enabling the network for Mission Command by using commercial technologies to build a safe and reliable network, the Army will facilitate the decisionmaking abilities of leaders and soldiers. Remaining prepared for decisive action, the Army will support the Joint warfighter by addressing capability gaps in vehicle fleet lethality and mobility while optimizing survivability and sustainability

In addition to these overarching modernization priorities, the Army also recognizes the need to support the Reserve component's domestic requirements and does this by resourcing CDU capabilities that also support the title 10 mission.

As the Army moves forward in retrograding deployed forces and equipment, we will need resources to restore equipment used in combat operations to an acceptable level of readiness through reset operations, which is a combination of repair, replacement, recapitalization, and the resources allocated for second destination transportation costs.

BALANCING PEOPLE, READINESS, AND MODERNIZATION

18. Senator MANCHIN. General Phillips and General Barclay, defense leaders have said that the costs of military pay and benefits are crowding out funds necessary for readiness and modernization of the force. The Chief of Staff of the Army talks about balancing resources for people, readiness, and modernization. Without a clear understanding of the risks and tradeoffs associated with each, a balanced approach may seem imprecise, somewhat indecisive, and perhaps risks allowing a hollow force to emerge. The Army must manage risk and make tradeoffs to field a trained and ready force regardless of its size or funds available to buy new systems or develop next generation technologies. How is the Army identifying and managing the distribution of risk between personnel, training, and modernization?

General PHILLIPS and General BARCLAY. The size and the steepness of cuts required by sequestration make it impossible to downsize the force in a deliberate, logical manner that allows the Army to sustain an appropriate balance of readiness, modernization, and end strength. Therefore, in the near term, the full weight of the sequester will primarily fall on the modernization and readiness accounts, where such drastic cuts will take years to overcome.

If we backload the budget reductions into the later years of the sequester period, that would better allow the Army an opportunity to properly plan and to sustain the balance we need in these uncertain times.

19. Senator MANCHIN. General Phillips and General Barclay, have you done any analysis to determine the red flags that signal that the Army is becoming hollow?

General PHILLIPS and General BARCLAY. Yes. The Army has an enduring requirements analysis process for Army units to report their readiness, per Army Regulation 220–1, on a monthly basis using the Unit Status Report (USR). The USRs are reviewed at each higher level of command and are briefed to the Vice Chief of Staff of the Army on a monthly basis in the Strategic Readiness Update (SRU) process and the Planning, Programming, Budgeting, and Execution Process.

The SRU reports are the Army's authoritative source on unit readiness and will flag readiness deficiencies in multiple areas—reduced resources for manpower, training, EOH, equipment readiness, and modernization efforts—that would lead to a hollow force.

20. Senator MANCHIN. General Phillips and General Barclay, can you explain what those indications are and how you will know in time to take the action necessary to avoid the consequences of hollowness?

General PHILLIPS and General BARCLAY. An indicator of hollowness is a force that lacks the right balance between end strength, modernization, equipment readiness, and unit training. The Army is seeing these indicators now. Our ability to train our soldiers and sustain our equipment is becoming limited. This constrains the Army's ability to ensure that it is able to deploy effectively and meet future requirements, while exposing our soldiers to unnecessary risk as they execute their mission.

A loss of the balance between end strength, modernization, equipment readiness, and unit training eliminates our ability to sustain 'appropriate' levels of readiness in support of our current defense strategy. If we continue along the current path of fiscal uncertainty we will be unable to avoid the consequences of a hollow army.

21. Senator MANCHIN. General Phillips and General Barclay, when you program for equipment for the Army, do you plan to buy 100 percent of the requirement? If not, why not?

General PHILLIPS and General BARCLAY. Given the current fiscal environment, projected drawdown of forces, and the rate of technological change, buying 100 percent of our equipment requirements is not always the best course of action. For example, technology may change before production lines can produce enough equipment to fill the entire Army requirement. Another example may be the case of a major acquisition program where the Army can't afford to buy 100 percent of the

requirement within a narrow band of time. In both cases the Army may use an incremental acquisition approach where it buys smaller quantities more often to take advantage of technology opportunities.

Instead of procuring 100 percent of the requirement, the Army has developed an equipping strategy that establishes goals and metrics for achieving an affordable balance between requirements and resources. The strategy is based on two lines of operation: equip units for their missions, and increase readiness by redistributing equipment.

Equipping units for their missions provides increasing levels of equipment as units move through the Army Force Generation (ARFORGEN) cycle and prepare for deployment.

Increasing readiness by redistributing equipment requires careful management of equipment inventories to include "friction" equipment, such as filling equipment sets, equipment in reset, and equipment in transit over strategic distances.

22. Senator MANCHIN. General Phillips and General Barclay, how does this not negatively impact readiness?

General PHILLIPS and General BARCLAY. Due to the declining fiscal resources, we can't afford to procure equipment for every unit, forcing prioritization of equipment allocations. Instead, we will mitigate readiness impacts through various management techniques.

First, the Army moves equipment and uses Theater Provided Equipment and Army Proposition Stocks to provide each deploying soldier or unit, regardless of component, the most modern equipment available.

Second, we currently have a very high level of EOH at the aggregate level across all components. While the Army is just under 90 percent of its' required EOH, at the individual unit level we either have too much or not enough. Part of the reason for misaligned equipment is that we have equipment sets in Afghanistan, equipment in transit, and equipment in depot maintenance being recapitalized or reset. Additionally, because of the pace of combat operations and units deploying with mission-tailored equipment packages, we have many units with equipment excess to their authorizations that must be redistributed.

Third, the Army has established goals, metrics, and priorities for achieving an affordable balance of equipment distribution using an ARFORGEN based resourcing model. ARFORGEN provides for a minimum quantity of equipment to support home station training and an increasing level of equipment as a unit prepares to, and eventually deploys.

23. Senator MANCHIN. General Phillips and General Barclay, do you need to reduce the size of the Army below 490,000 in order to properly equip it?

General PHILLIPS and General BARCLAY. The Army does not have to reduce the AC below 490,000 to properly equip it. The Army currently has the highest levels of EOH and is the most modernized it has ever been. Equipment will not drive force reductions; budget reductions in the Budget Control Act and the full implementation of sequestration through fiscal year 2021 will drive force reductions over time, as previously stated in testimony. In the near term, the full weight of sequestration will fall on the modernization and readiness accounts. Once implemented, these drastic cuts will take years to overcome.

### M1 ABRAMS AND M2 BRADLEY PRODUCTION GAPS

24. Senator MANCHIN. General Phillips, please explain the logic behind the Army's plans for 3- to 4-year production gaps for M1 Abrams tanks and M2 Bradley fighting vehicles?

General PHILLIPS. The Abrams tank remains the best tank in the world as a result of significant improvements over the past 2 decades while reducing the number of tank variants in the fleet from six to two. The Army is currently funded to produce enough M1A2 System Enhancement Package (SEP) v2 tanks to fully meet its current force structure requirements, with production ending in December 2014. At this point, the Abrams tank fleet will only be 3- to 4-years-old on average. The Army's Two-Variant Fleet Strategy for Abrams tanks (M1A2SEP v2 and M1A1 Situational Awareness [SA]) is fully interoperable. The Abrams tank fleet strategy has been carefully synchronized with the Armored Brigade Combat Team (ABCT) force structure strategy and will be fully implemented in fiscal year 2015. Pending future force structure decisions, the notion of pure-fleeting the ARNG with the Abrams M1A2SEP v2 tank would not only cost approximately $2 billion in a fiscally con-

strained environment, but would also result in placing several hundred recently modernized M1A1 SA tanks into long-term storage.

The current slow-down in U.S. Army Abrams tank production will likely continue until the next major recapitalization of the Abrams tank in 2019. The Army is continually assessing mitigation alternatives to provide a sustaining workload at the Joint Systems Manufacturing Center (JSMC) in Lima, OH, for the foreseeable future, and this includes Foreign Military Sales (FMS). We also recognize that FMS inherently fluctuates and is influenced by the overall global economic environment. However, currently there is every indication that both "Firm" and "High Potential" Abrams tank FMS production will maintain a minimal level of sustaining work flow through fiscal year 2016.

In the near term, the Army is aggressively identifying mitigation measures that may be needed to preserve critical manufacturing skills and the supplier base. Specifically, we have extended our fiscal year 2012 production of 67 M1A2SEP v2 tanks for 2 years through December 2014. With the fiscal year 2013 congressional add of $181 million, the Army is considering a range of options that could further extend production of the Abrams M1A2SEP v2 tank for approximately 12–18 months or help provide significant work for critical and fragile Tier II and III suppliers. We anticipate reporting our specific mitigation approach by the end of June 2013.

*Bradley Fighting Vehicle:*

The Bradley Fighting Vehicle has performed well in the wars in Iraq and Afghanistan. The high priority placed on the Ground Combat Vehicle (GCV), which is slated to replace the Infantry Fighting Vehicle variant of the Bradley family of vehicles, is a testament to the importance of the armored-troop-carrying and direct engagement fighting vehicle with its multiple functional configurations. From Operation Desert Storm to the present, as the threat has adapted, the Army has upgraded the Bradley with improved lethality, armor, fire controls, communications, and situational awareness. With the fiscal year 2013 congressional add of $140 million, the Army is considering a range of options that could extend production of the M2A3 Operation Iraqi Freedom variant via conversion from M3A3s for approximately 2 years and help provide significant work for critical and fragile suppliers.

*Army Industrial Base Study:*

The Army is conducting a comprehensive study and analysis into the current state of manufacturing within the overall combat vehicle industrial base network. The analysis and planning for the future use of JSMC is being accomplished within the context of this complex network. We anticipate providing our preliminary findings in a separate report primarily focused on the Supplier Base and Critical Manufacturing Skills portion of the industrial base study by the end of June 2013, with the final report forthcoming in December 2013.

25. Senator MANCHIN. General Phillips, what courses of action are you studying to adequately deal with the potential loss of industrial capability or capacity associated with these production gaps?

General PHILLIPS. For Abrams and Bradley, the Army supports maintaining an industrial base (IB) and remains especially attuned to any impacts on critical suppliers and needed expertise as the Army faces reduced budgets.

The Army is working to establish ways to measure the ability of its IB to sustain essential capabilities. The Army will ensure that industrial base reversibility cost and risk are carefully managed by: (1) continuing ongoing efforts to determine the health of IB sectors critical to support programs; (2) identifying and assessing current status of organic and commercial critical manufacturing and maintenance capabilities required to meet future contingency investment and regeneration requirements; and (3) identifying supply chain issues in design, manufacturing and sustainment that can present risk to critical capabilities. Some of the mechanisms in place are:

1. The Industrial Base Baseline Assessments (IBBA), which aim to assess the health of selected IB areas critical to the Army. IBBAs include sector and subsector assessment of programs identified as critical by Program Executive Offices (PEO) and Life Cycle Management Commands, and determine the impact of reductions in funding to program requirements.
2. The Sector-by-Sector/Tier-by-Tier (S2T2) IB analysis, which establishes early warning indicators of risk, particularly at lower tiers, to strengthen the supply chain and to mitigate potential points of failure. The S2T2 analysis uses fragility and criticality criteria to identify and assess vulnerable firms in the commercial IB supply chain and to develop courses of action to mitigate risk.

In the near term, the Army is aggressively identifying mitigation measures that may be needed to preserve critical manufacturing skills and the supplier base. Specifically for the Abrams tank, we have extended our fiscal year 2012 production of 67 M1A2SEP v2 tanks for 2 years through December 2014. With the fiscal year 2013 congressional add of $181 million to the Abrams tank, the Army is considering a range of options that could further extend production of the Abrams M1A2SEP v2 tank for approximately 12–18 months or help provide significant work for critical and fragile Tier II and III suppliers. With the fiscal year 2013 congressional add of $140 million, the Army is considering a range of options that could extend production of the M2A3 Operation Iraqi Freedom variant via conversion from M3A3s for approximately 2 years and help provide significant work for critical and fragile suppliers. We anticipate reporting our specific mitigation approaches to Abrams and Bradley by the end of June 2013. The Army is conducting a comprehensive study and analysis into the current state of manufacturing within the overall combat vehicle industrial base network. The analysis and planning for the future use of the JSMC in Lima, OH, is being accomplished within the context of this complex network. We anticipate providing our preliminary findings in a separate report primarily focused on the Supplier Base and Critical Manufacturing Skills portion of the IB study by the end of June 2013, with the final report forthcoming in December 2013.

It is through these efforts that the Army is actively monitoring the IB and addressing challenges of critical and fragile elements to identify systemic and fundamental issues that will highlight unacceptable risk areas that need immediate attention.

26. Senator MANCHIN. General Phillips, have you performed any analysis of the potential readiness or operational impact of the loss of industrial capacity or capability to support fielded and deployed weapons systems? If not, why not, and if so, what are your findings?

General PHILLIPS. Yes. To date we have had no issues that would prevent us from sustaining either fleet. The Abrams tank remains the best tank in the world as a result of significant improvements over the past 2 decades while reducing the number of tank variants in the fleet from six to two. The Army is currently funded to produce enough M1A2SEP v2 tanks to fully meet its current force structure requirements, with production ending in December 2014. At this point, the Abrams tank fleet will only be 3- to 4-years-old on average. The Army's Two-Variant Fleet Strategy for Abrams tanks (M1A2SEP v2 and M1A1 SA) is fully interoperable. The Abrams tank fleet strategy has been carefully synchronized with the ABCT force structure strategy and will be fully implemented in fiscal year 2015. The Bradley Fighting Vehicle has performed well in Iraq. From Operation Desert Storm to the present, as the threat has adapted, the Army has upgraded the Bradley with improved lethality, armor, fire controls, communications, and situational awareness.

We are working mitigation efforts to minimize potential impacts in the near-term. The ongoing PEO GCS Industrial Base study, with A.T. Kearny assisting, will help us determine what our current and future industrial base needs are and will also help us develop viable strategic alternatives to sustain the GCVs base within a constrained fiscal environment. We anticipate providing our preliminary findings in a separate report primarily focused on the Supplier Base and Critical Manufacturing Skills portion of the IB study by the end of June 2013, with the final report forthcoming in December 2013.

27. Senator MANCHIN. General Phillips, how do you intend to manage this risk?

General PHILLIPS. For Abrams and Bradley, the Army supports maintaining an industrial base and remains especially attuned to any impacts on critical suppliers and needed expertise as the Army faces reduced budgets.

*Abrams Tank:*

The current slow-down in U.S. Army Abrams tank production will likely continue until the next major recapitalization of the Abrams tank in 2019. The Army is continually assessing mitigation alternatives to provide a sustaining workload at the JSMC in Lima, OH, for the foreseeable future. In the meantime, the Army continues to aggressively apply mitigation measures to preserve critical skills and supplier base. Specifically, we have extended our fiscal year 2012 production of 67 M1A2SEP v2 tanks for 2 years through December 2014. With the fiscal year 2013 congressional add of $181 million, the Army is considering a range of options that could extend production of the Abrams M1A2SEP v2 tank for approximately 12–18 months and help provide significant work for critical and fragile suppliers. We also recognize that FMS inherently fluctuates and is influenced by the overall global eco-

nomic environment. However, currently there is every indication that both "Firm" and "High Potential" Abrams tank FMS production will maintain a minimal level of sustaining work flow through fiscal year 2016. The Army is conducting a rigorous and detailed Industrial Base Study that includes JSMC, which should help us identify other potential mitigation courses of action. We anticipate providing our preliminary findings in a separate report primarily focused on the Supplier Base and Critical Manufacturing Skills portion of the industrial base study by the end of June 2013, with the final report forthcoming in December 2013.

*Bradley Fighting Vehicle:*

The Bradley Fighting Vehicle has performed well in the wars in Iraq and Afghanistan. The high priority placed on the GCV, which is slated to replace the Infantry Fighting Vehicle variant of the Bradley family of vehicles, is a testament to the importance of the armored-troop-carrying and direct engagement fighting vehicle with its multiple functional configurations. From Operation Desert Storm to the present, as the threat has adapted, the Army has upgraded the Bradley with improved lethality, armor, fire controls, communications, and situational awareness. With the fiscal year 2013 congressional add of $140 million, the Army is considering a range of options that could extend production of the M2A3 Operation Iraqi Freedom variant via conversion from M3A3s for approximately 2 years and help provide significant work for critical and fragile suppliers.

MANAGEMENT OF STRATEGIC RISK IN THE INDUSTRIAL BASE

28. Senator MANCHIN. General Barclay, a major tenet of both the 2010 Quadrennial Defense Review and the 2012 Defense Strategic Guidance is protection of the Nation's defense industrial base. However, DOD funding reductions in fiscal year 2013 and fiscal year 2014 have reduced the Army's modernization investment accounts and acquisition strategy. How do you take into account industrial base issues in programming for Army modernization?

General BARCLAY. The Army's assessment of essential capabilities and capacities of its industrial base is a dynamic process. We continuously re-examine skills and capabilities needed in the industrial base to preserve the ability to ramp up to meet urgent needs in the event of future contingency operations. These assessments are dependent on which programs the Army will pursue based on risk, affordability, cost effectiveness, and fiscal planning guidance.

The Army Organic Industrial Base Strategic Plan is our primary management framework of maintaining a viable and relevant industrial base for organic assets and commercial industry. This plan identifies several specific goals and objectives to support the Army's modernization plan.

In addition, the Army continues to employ and improve criteria to actively monitor the defense industrial base to assess any approach of irreversible loss of capacity or capability. These efforts include: (1) S2T2 analysis; (2) establishing metrics to feed consumption data to display areas of risk; (3) a study of the combat vehicle industry; (4) protecting critical portions of the industrial base; (5) conducting an IBBA; and (6) holding Organic Industrial Base Corporate Boards to provide strategic guidance and direction for the Army's Industrial Base efforts as part of the U.S. Army Materiel Command's "Materiel Core Enterprise."

The Army continues to develop and implement plans to modernize and upgrade the industrial base, even as resources are declining. These plans are in various stages of approval for Army ammunition plants, depots, and arsenals.

29. Senator MANCHIN. General Phillips, what in your view, is the risk that the loss of design and manufacturing capability and capacity in the industrial base could undermine the concept of reversibility?

General PHILLIPS. Loss of design and manufacturing capability and capacity in the industrial base could present a serious challenge to the Army's ability to quickly make a course change in response to dynamic conditions. However, the Army is undertaking and participating in initiatives to help ensure that design and manufacturing capability and capacity in the industrial base remain strong.

The Army will ensure that the risk of loss of design and manufacturing capability and capacity in the industrial base is carefully managed by: (1) continuing ongoing efforts to determine the health of industrial base sectors critical to support Army and Joint Services programs; (2) identifying and assessing the current status of organic and commercial critical manufacturing and maintenance capabilities required to meet future Army contingency investment and regeneration requirements; and (3) identifying supply chain issues in design, manufacturing, and sustainment that can present risk to critical Army capabilities.

As one of the key components of the Army Organic Industrial Base Strategic Plan, capacity, infrastructure, and workforce are sized to sustain joint core depot and critical manufacturing capabilities. These capabilities include the essential facilities, equipment, and skilled personnel necessary to ensure that the Army and other Service organic depots are a ready and controlled source of technical competence and have the resources necessary to meet the readiness and sustainment requirements of weapon systems supporting mobilization, national defense contingency operations, and other emergency requirements. Depot and arsenal workforces and infrastructures will be sized and adjusted accordingly over time to sustain core depot and critical manufacturing capabilities to support warfighting equipment during current and future contingency operations.

The Army is participating in a DOD-wide effort to assess the health of and risk to the industrial base on a S2T2 basis. The Army is also incorporating mitigative strategies involving the FMS program to address identified risks. The FMS program allows Army vendors to diversify and balance military with commercial business so they can weather the lean years and be in position to compete when the Army starts investing in the next generation of products or recapitalizes current platforms. Sales under the FMS program also help to sustain highly-skilled jobs in the Defense industrial base by maintaining and extending production lines, thereby strengthening reversibility.

30. Senator MANCHIN. General Phillips, which areas of the industrial base are the greatest areas of concern?

General PHILLIPS. We are most concerned with the loss of critical skills and manufacturing capabilities but the Army is taking several actions to support a strong and viable commercial and organic industrial base.

In the commercial industrial base, the Army is working with the Office of the Secretary of Defense and the Army Materiel Command to assess critical manufacturing capabilities and seeking innovation within the supply chain sectors through responsible investment. The Army is also analyzing the challenges of critical and fragile elements of the commercial industrial base to identify systemic and fundamental issues that can be resolved through engagement across the public and private sectors. For example, the Army continues its engagement in the S2T2 industrial base analysis that: (1) establishes early warning indicators of risk, particularly at lower-tiers; (2) strengthens the supply chain to mitigate potential points of failure; and (3) improves coordination among Services to ensure a viable industrial base is maintained.

The Army is conducting a comprehensive Combat Vehicle Portfolio Industrial Base Study through A.T. Kearney, a global management consulting firm. The 21-week study, with a final report to be submitted to Congress later this year, is assessing the commercial and organic combat vehicle industrial base, viable strategic alternatives, and sustainment of the combat vehicle industrial base in a constrained fiscal environment.

The Army is also engaged in IBBAs that aim to sustain those areas critical in supporting Army and Joint Services programs by: (1) conducting sector assessments of programs identified as critical by PEOs and Life Cycle Management Commands; (2) determining the impact of reductions in funding to program requirements; and (3) developing recommendations which enable the industrial base to sustain current and future warfighter requirements.

The Army's strategy for ensuring that its organic industrial base remains viable and relevant includes: (1) establishing modern facilities, equipment, and skill sets at the same rate that the Army modernizes its weapon systems; (2) ensuring capabilities and capacities are sustained to support current and future contingency operations; (3) investing to ensure that facilities are capable of maintaining core competencies and critical manufacturing capabilities; and (4) prioritizing funding to achieve the desired end state of viable and relevant organic industrial base facilities.

MULTI-COMPONENT UNITS

31. Senator MANCHIN. General Barclay, last March, Army leaders indicated an interest in creating units that combine Active and Reserve Forces. That would be, for example, an Active or Reserve component brigade headquarters with perhaps two AC battalions and a National Guard battalion assigned. What is the Army's current thinking on the creation of multi-component (MC) formations?

General BARCLAY. A MC unit provides personnel and or equipment from more than one Army component (AC, ARNG, USAR) into a cohesive fully capable Army

unit to the maximum extent possible within statutory and regulatory constraints. A MC unit has unity of command and control similar to that of single-component units and status does not change a unit's doctrinal requirement for personnel and equipment. There are currently 37 MC units in the Army. The Army is examining the role of the MC unit in the future operational environment with the intent of expanding its use as a way to mitigate AC end strength reductions without reducing capability or capacity.

32. Senator MANCHIN. General Barclay, have you done any cost analysis to determine incremental increases or savings associated with such a force structure? If so, what are your findings?

General BARCLAY. The Army is in the process of conducting the analysis to determine what incremental funding changes are associated with utilizing MC units. The Army will pursue a MC structure only if it is operationally feasible and provides a means for cost savings.

33. Senator MANCHIN. General Barclay, I understand that during the Cold War the Army used National Guard combat brigades to round-out to complete the structure of a division, or round-up to reinforce or add a brigade to the structure of a division. What is the Army's assessment, positive and/or negative, of MC formations from past experience?

General BARCLAY. The Army assesses that the traditional Cold War round-out MC unit design is best suited for total mobilization, when 100 percent mobilization of the Reserve component for the duration of the emergency is authorized. During the Gulf War, the decision to activate the round-out/up brigades was made long after the initial force flow, which did not allow sufficient time for the activated Reserve component brigades to train to the required standard and deploy prior to the start of ground combat operations. Since then, demands of the modern battlefield led the Army to use unit rotations, rather than the individual replacement policy used in past conflicts. Over the last decade, the Army has successfully formed and deployed MC organizations on a rotational basis numerous times, but the differing requirements for Active and Reserve components to remain at home station between deployments did not allow for habitual command relationships within these organizations. This nontraditional manner of forming MC units allowed the Army to moderate the stress on high-demand AC capabilities. The Army is studying ways to take advantage of the benefits of MC capable units while avoiding the challenges that faced such units in the past.

34. Senator MANCHIN. General Barclay, what is different now or suggests that MC formations will work today if they did not work well enough to continue in the past?

General BARCLAY. In the past, we designed MC units with a Cold War mentality. We assumed that these units would mobilize, assemble, train, and deploy for the duration of the conflict. This traditional MC design is ill-suited to deploying forces on a rotational basis, as we have for the past decade, since Reserve component units require a longer period between deployments. Despite this initial challenge, the Army had numerous positive experiences with MC designs performing well during a decade of continuous warfare. The lessons learned from these experiences have led the Army to explore an enhanced MC design which will better allow for Active and Reserve component units to integrate into a single unit and meet the demands of the modern battlefield. This new design will focus on creating habitual relationships between AC units and multiple Reserve component units such that there will always be Reserve component units and personnel available to partner with their AC counterpart while avoiding undue stress on the Reserve component.

[Whereupon, at 10:47 a.m., the subcommittee adjourned.]